EXHIBIT

Exhibit No.: _____

Issue(s): Natural Gas Prices
Witness/Type of Exhibit: Busch/Surrebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2001-299

SURREBUTTAL TESTIMONY

OF

JAMES A. BUSCH

Submitted on Behalf of the Office of the Public Counsel

THE EMPIRE DISTRICT ELECTRIC COMPANY

Case No. ER-2001-299

Exhibit No. 93
Date 5-29-01 Case No. ER-2001-299
Reporter KR

May 17, 2001

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of the application of The Empire District Electric Company for a general rate increase.	)))	Case No. ER-2001-299

AFFIDAVIT OF JAMES A. BUSCH

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

James A. Busch, of lawful age and being first duly sworn, deposes and states:

1. My name is James A. Busch. I am the Public Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony consisting of pages 1 through 14 and schedules.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

James A. Busch

Subscribed and sworn to me this 17th day of May, 2001.

Notary Public

Joyce C. Neuner
Notary Public, State of Missouri
County of Osage
My Commission Exp. 06/18/2001

SURREBUTTAL TESTIMONY

OF

JAMES A. BUSCH

CASE NO. ER-2001-299

EMPIRE DISTRICT ELECTRIC COMPANY

Q. Please state your name and business address.

A. My name is James A. Busch and my business address is P. O. Box 7800, Jefferson City, MO 65102.

Q. Are you the same James A. Busch who filed direct and rebuttal testimony in this case?

A. Yes I am.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to address the rebuttal testimony of Empire witness Mr. Stan Kaplan.

Q. What is the price of natural gas that Empire, and Mr. Kaplan, is recommending to use in determining fuel cost for this case?

A. The methodology proposed by Mr. Kaplan is to utilize the NYMEX futures 12-month strip. In the direct testimony phase of this proceeding, that price was $4.608 per MMBtu according to Schedule GS-6 attached to Mr. Greg Sweet's direct testimony. This price was derived using the 12-month futures strip as of October 11, 2000. However, no where in any additional testimony does Empire

indicate if this is the price that it intends to use to establish rates, or if there is some "magical date" in the future from which to derive the price.

Q. Does Mr. Kaplan address this concern?

A. Mr. Kaplan responded to Data Request number 622 sent by Public Counsel asking on what date he would suggest utilizing the futures market for the purpose of determining rates for Empire. In the response to this data request, it was indicated that "in general, it would be best to use the most current available series of future prices, since those prices should reflect the most up-to-date market information. This exception would be if some current development (e.g. a hurricane that has forced the shut-in of off-shore gas wells) is apparently having a material but probably short-lived impact on market prices." Apparently Company is recommending that fuel rates be set on some future date, unless there are some short-term developments that make the futures strip unreliable.

Q. Are hurricanes the only developments that could have a short-lived impact on market prices?

A. No. There are several factors that could have a short-lived impact on current market conditions and consequently the futures strip. Storage injection or withdrawal levels substantially different than what was expected. For example, on May 16, 2001, the American Gas Association (AGA) reported a net injection of 119 Billion Cubic Feet (Bcf) into storage, above industry expectations. This surprise announcement led to the futures price for June to drop $0.355 per MMBtu and the 12-month futures strip to drop $0.2816 per MMBtu. A forecast for extremely warm or cold weather in the near future or a speculative run-up

caused by unknown market psychology could also impact the market. These are just some examples of short-lived events that could cause the futures 12-month strip to take sharp market turns on any given day.

The response to Data Request 622 reinforces the argument that relying solely on the 12-month futures strip to establish the price of natural gas to establish rates is risky for the ratepayers. If the date chosen for setting natural gas costs is a date when the market is being influenced upward by short-lived factors, extraordinary high electric rates could be set permanently.

Q. On page 12, lines 11 – 15 of his rebuttal testimony, Mr. Kaplan criticizes you for not offering any analytical support for the use of your hybrid approach. Do you have any current analysis?

A. Yes. Attached, as Schedule JAB-SR1 is two graphs that compare the 12-month futures strip versus my methodology. The first compares the futures strip to my methodology during January and February of the current year. The second graph compares the two methodologies during June and July of 1999. What the graphs indicate are that my methodology provides a smoother "predictor" of natural gas prices levels than the volatile 12-month futures strip. This is important because the decision-makers must decide what price of natural gas to use to determine permanent rates. Since the futures strip is so volatile, great significance is placed on choosing a day for the price that will be representative of the future. My methodology reduces the risk of picking a day that is an outlier.

Q. How does your method compare to Mr. Kaplan's as a predictor of natural gas cost?

A. As indicated above, my methodology over the course of time is a smoother predictor of prices compared to the volatile 12-month futures strip. Choosing different dates throughout a month could have pronounced impacts on the 12-month futures strips' predicting ability due to short-lived developments acknowledged by Mr. Kaplan. My methodology, because it uses a 24-month futures weighted with the past, is less likely to make permanent an extreme price for use in establishing rates.

Q. What does using the past price levels have to do with establishing a prospective level of natural gas cost in rates?

A. Most expenses set in rates are based on the Company's actual past experience. Because the price of natural gas is extremely volatile and changes on a daily basis, especially in today's market, it is important to use an average of multiple years of experience. In the present situation, it makes sense to use both the past experience and future projections in trying to determine what the best price is to establish permanent rates.

Q. Does Mr. Kaplan's use of the future market take into account the past?

A. No, even though in response to Public Counsel Data Request number 623, Mr. Kaplan admits that "historical performance is one factor that **should** (emphasis added) be considered in establishing the gas prices to be included in rates. In general however, and certainly at the current time, larger market developments should have much greater weight." It is interesting that he acknowledges that the

past is relevant at some level, yet he completely ignores it when developing a methodology to establish the natural gas price to set rates.

Q. On page 13, line 1 of his surrebuttal testimony, Mr. Kaplan states that he believes the price of natural gas "will stay well above $4.00 per MMBtu through 2001 and 2002." How much above $4.00 does Mr. Kaplan believe it will be?

A. According to Data Request response 624, well above in this case is $4.25 per MMBtu.

Q. What price level is Empire recommending in this case?

A. According to its direct testimony, that price is $4.608 per MMBtu. If you use the 12-month futures strip as of May 15, 2001, the price would be $4.822. Interesting that Mr. Kaplan feels that prices will average $4.25 per MMBtu, but is recommending that the Company be allowed to recover costs that are 25 – 50 cents greater than his assessment of future price levels. This logic would lead to excess profits of approximately 25 cents or more for every MMBtu purchased and used to generate electricity. It is also curious that Mr. Kaplan supports the use of the futures strip as a good predictor of future prices, but his own opinion about what the price of natural gas will be is different than the futures strip would indicate.

Q. On page 13, lines 1 – 4, Mr. Kaplan states, "In this circumstance, including in the forecast calculation months when prices were low and the market outlook very different, will likely have the effect of understating future gas prices." Please comment on this statement.

A. Mr. Kaplan suggests that using past experience in today's market as a tool to establish prices is undesirable due to a very different market outlook today than in the past. However, Empire is proposing to set rates for one to three years into the future, based on current market conditions that affect the 12-month futures strip. Waiting one month, or just one day, in this market will cause the outlook for the future to change. As pointed out in my rebuttal testimony, the 12-month futures strip has fallen dramatically over the past few months and the outlook for the future has changed. For example, according to the AGA, storage has filled dramatically over the past month, posting weekly triple digit increases recently when the previous all-time high injections for the same period were below 100 Bcf. This fact changes the market outlook dramatically from any previous outlook. In fact, the outlook for this year's price of natural gas will change as the weather changes, storage is increased, and forecasts for this winter's weather become known. My approach helps to smooth out the volatility inherent in the futures market by weighting it with actual prices from the previous two-year period.

Q. Can you elaborate why your approach is more reasonable than Mr. Kaplan's reliance solely on the extremely volatile futures market?

A. Yes. Locking in the price of natural gas at whatever price is currently being quoted on the NYMEX guarantees that the Company would not have to pay any more for natural gas than the amount that is built into rates if it utilizes futures or fixed-price contracts to set its natural gas costs. However, the Company can than take advantage of dips in the market. Dips happen because the outlook is

constantly changing. Empire could lock in its natural gas supplies guaranteeing that the shareholders will not have to pay more for natural gas. Then whenever the price dips in the future, below the rate that was built in to permanent rates, the Company can continue to purchase futures for months beyond the initial time frame. By locking in natural gas costs below the built-in price level, the Company is able to guarantee profits by charging consumers more than its cost. Furthermore, the Company could also attempt to lock in prices below the built-in amount for a 3 – 5 year period through some fixed price contract with a supplier. A supplier may be willing to lock in a price below the current futures strip for a guaranteed price for a certain amount of years. This would guarantee that the shareholders benefit, without the same benefit for consumers.

Q. On page 14, of his testimony, Mr. Kaplan disagrees with your approach of sharing risk between shareholders and customers. He discusses the shareholder risk of locking in the price on too many supplies. He states, "if Empire acquires too much gas at the futures price, and the actual market price drops, the shareholders will be left holding the bag." Please comment.

A. If Empire were to purchase too much natural gas through the use of futures or fixed price contracts, Empire would have the opportunity to resell those volumes through off-system sales. This would offset any excess volumes that the Company purchased, and would lessen the weight of the bag that it would be left holding. Empire also has the ability to release excess capacity to the market to generate additional revenues. At this time, these revenues would flow straight to the shareholders profit levels. The Company has ways to mitigate the price of

natural gas when that price is above the built-in amount. Further, if prices remain high or spike higher, the Company can switch the fuel mix that it utilizes to generate electricity to some extent, or it can go to the market to attempt to purchase power.

Secondly, Mr. Kaplan states, "the shareholder's risks are by no means eliminated." I never claimed that shareholder risk is eliminated. My approach shares risk between both shareholders and ratepayers.

Q. Further Mr. Kaplan states that "the ratepayers are protected by the fixed fuel charge embedded in rates and the shareholders are protected by the locked-in price." Can you elaborate on this statement?

A. Yes. No matter what methodology is utilized to establish the level of natural gas costs to use in establishing permanent rates, the ratepayers "benefit" when there is an increase in actual natural gas costs. However, the ratepayers are at greater risk than the Company for price declines when the price of natural gas embedded in permanent rates is based on the futures market. Since the futures market can fluctuate wildly from one day to another, rates established on a day when prices spike will harm ratepayers well into the future. What mechanism is there to protect them when the price falls? None. Shareholders profit because the Company has the flexibility to use its already paid for expertise to get the most optimal price for natural gas compared to the cost used to establish rates.

Q. Mr. Kaplan criticizes you in his rebuttal testimony by inferring from a data request response that you state Empire could only lock in its natural gas costs if

the futures strip was used to set permanent rates. Is this a correct interpretation of your response?

A. No, it is not. In no way would I suggest that the Company could only lock in natural gas costs if the futures market was utilized to establish rates. Any Company can use the futures market or other fixed rate mechanisms at any time, regardless of the methodology employed to set permanent rates.

Q. Mr. Kaplan suggests, on page 15 of his rebuttal testimony, "The effect of the hybrid approach is to stack the deck against the Company, by setting a unrealistically low price that Empire would find it difficult to hedge." Please comment.

A. My hybrid approach does not "stack the deck" against the Company. My approach does not set an unrealistically low price. My approach does not prohibit Empire from hedging. If the price of natural gas continues to fall, as it has over the past month or so, it is possible that my method would end up suggesting a higher fuel cost than the Company's approach would suggest. If you refer to page two of Schedule JAB-SR1, it can be seen that during this time frame, my methodology would have resulted in a higher price in rates than the 12-month futures strip. Hardly the type of methodology that "*stacks the deck against the Company, by setting a unrealistically low price that Empire would find it difficult to hedge.*" (Mr. Kaplan's emphasis)

Q. Is it possible for the futures strip to drop to the point that a straight futures-strip generates a lower price than your methodology?

A. Yes, it is. The 12-month futures strip has already shed approximately 80 cents off its value in the past month. If conditions remain favorable, mild weather throughout most of the nation, increased storage builds, and more natural gas available due to the increase in production will continue to put downward pressure on the price of natural gas. To state that prices **will not** fall this year is premature.

My methodology merely takes into account previous history with a forward look at where prices may eventually be. In Mr. Kaplan's direct testimony he testifies at length about how well Empire was able to beat the actual NYMEX price in purchasing natural gas, even though he argues that same futures market should be used to establish the price level for natural gas to be used to establish permanent rates. I do not believe Empire's gas procurement ability decreased over the past few years.

Q. Mr. Kaplan also criticizes your approach because you did not address transportation costs. Is that a fair criticism?

A. No it is not. The purpose of my testimony was to access the commodity price of natural gas just as Mr. Kaplan did. Transportation costs were not addressed because it was assumed that these costs are what they are and the Company would be entitled to recover in rates an appropriate level for the costs.

Q. In his summary, Mr. Kaplan again mentions that your approach sets a low natural gas cost that will not allow the Company to hedge its gas costs. What can you conclude from this statement?

A. I conclude that the Company is interested in hedging its natural gas costs, regardless of the impact it will have in its ratepayers. No where in Mr. Kaplan's testimony will you find information regarding Empire's ability to hedge its costs through the use of financial instruments or other types of arrangements for the benefit of consumers, other than the obvious fact that the ratepayers will not pay above the embedded natural gas cost. The Company in the past has been able to procure natural gas for below market rates and has the same ability to do so again.

Q. How do you know that the Company has been able to lock in prices below the NYMEX futures prices?

A. First, Mr. Kaplan discusses it in his direct testimony starting on page 16, and in fact, has a schedule showing Empire's ability to acquire natural gas below the NYMEX settled price (Kaplan direct, schedule SMK-6). Second, on page 17 of his direct testimony, Mr. Kaplan acknowledges that the Company in the past has been able to achieve fixed price multi-month or multi-year contracts for a portion of its natural gas supply. Finally, the Company does not purchase its natural gas from the Henry Hub, the area that the NYMEX uses. Empire purchases its supplies off of the Williams pipeline. There is a basis differential between the two pipelines, with the Henry Hub generally being the more expensive location. If the NYMEX is used, and Empire fixes its contracts directly through a supplier, the price it will be quoted will be less than the actual NYMEX 12-month strip due to this basis differential.

Q. What does the futures market represent?

A. It is a market where people go to hedge against adverse price movements. In fact, NYMEX itself, in a brochure produced by NYMEX describing the futures market states, "The futures price represents the **current** market **opinion** of what the commodity will be worth at some time in the future." (A Guide to Energy Hedging, page 8, New York Mercantile Exchange, emphasis added) No where in that definition does it describe the futures prices as a **predictor** of natural gas prices. The futures are utilized to manage risk. Entities utilizing the futures market determine what price it can afford to buy or sell natural gas, and purchase or sell the contracts that are necessary to protect itself.

Q. Please discuss Schedule SMK-6 that Mr. Kaplan attached to his rebuttal testimony.

A. Schedule SMK-6 is Mr. Kaplan's attempt to show his methodology is reasonable compared to Staff's and my methodologies. He compares Staff's three-year average, versus the future prices proposed by Empire, versus my hybrid approach with actual prices through May of this year, with the rest of the data points being used by the futures strip.

Q. Is this a valid comparison of the plans?

A. No it is not. This comparison merely compares the three methodologies proposed versus a 19-month futures strip. Mr. Kaplan's own testimony indicates that there is anywhere from a 20% to 40% divergence between the futures price and actual price. However, since we have no way of knowing what the futures prices will actually turn out to be, comparing any methodology to the current futures strip is

not very helpful, especially when one of the methodologies being compared relies exclusively on the futures market.

Q. Please give a more detailed description of schedule JAB-SR1.

A. Schedule JAB-SR1 is a comparison of the 12-month futures strip and the hybrid approach discussed in my direct testimony. This schedule compares the 12-month futures strip on a daily basis from the second of January 2001 through February 26, 2001 with the hybrid approach that I am recommending. As can be seen from the graph, utilizing the futures strip can be a very risky proposition for the ratepayers. Depending upon the day that is chosen to determine natural gas prices can make a dramatic difference in rates. For instance, the high 12-month futures price was $6.630 per MMBtu and the low was $5.227 per MMBtu, a difference of $1.403 per MMBtu. By comparison, the difference between my high and low price was $0.460 per MMBtu ($4.416 vs. $3.956). Clearly, my methodology provides a much more stable predictor for establishing the price of natural gas to establish rates. The futures price is very volatile and if the decision-makers do not chose the appropriate date upon which to use the futures to set the price could cause the ratepayers substantial detriment.

To further this point, when I established my price on March 31, 2001, my method established a price of $3.912 per MMBtu, while the 12-month futures strip was $5.097 per MMBtu. Using May 15, 2001 prices, my methodology would establish a price of $3.768 per MMBtu, while on May 16, the price would be $3.864 per MMBtu, a difference of ten cents. The 12-month futures strip on those two days was $4.584 per MMBtu and $4.822 per MMBtu, respectively, a

difference of $0.24. This comparison shows how the Company's method uses a less stable predictor for natural gas costs.

Q. Does this conclude your surrebuttal testimony at this time?

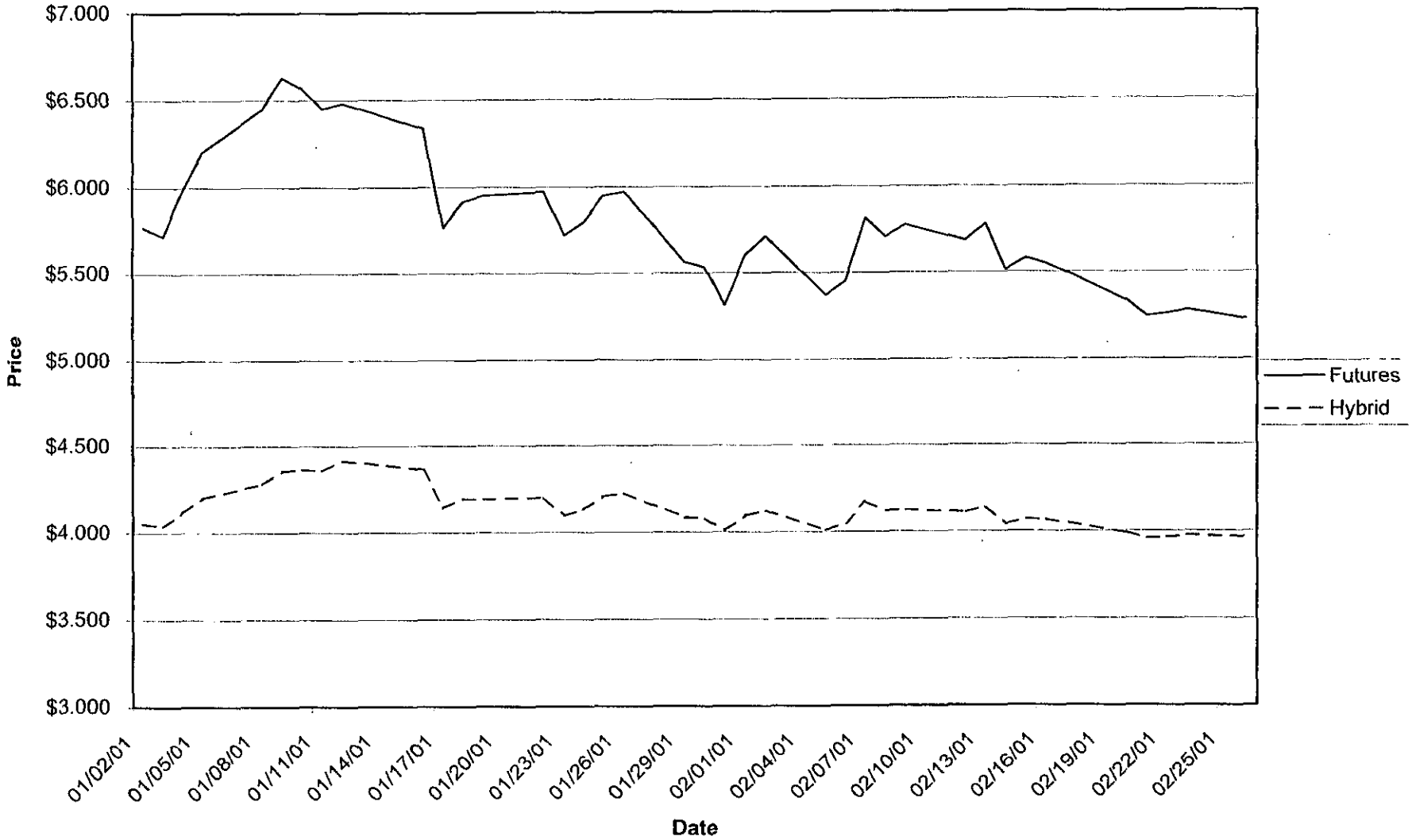
A. Yes it does.

OFFICE OF PUBLIC COUNSEL

ER-20001-299

Empire District Electric Company

Comparison 12-month Futures vs. Public Counsel's Hybrid Approach (January - February 2001)



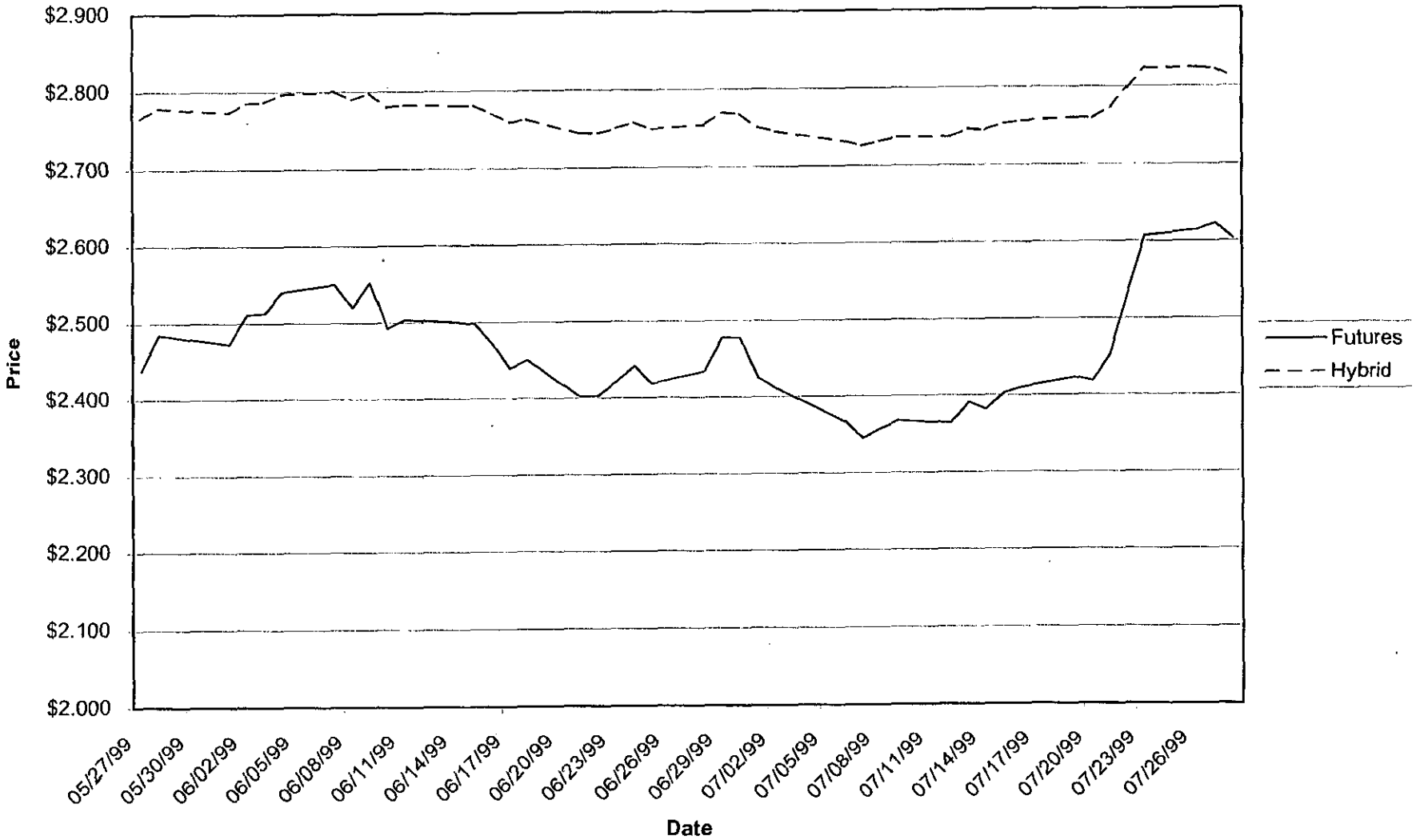
Schedule JAB-SR1

OFFICE OF PUBLIC COUNSEL

ER-2001-299

Empire Distric Electric Company

Comparison 12-month Futures vs. Public Counsel's Hybrid Approach (June - July 1999)



Schedule JAB-SR1