Approved April 20, 1983
Date

MINUTES OF THE House SUB COMMITTEE ON Energy.

The meeting was called to order by Representative Keith Farrar
Vice- Chairperson at

3:30 ~~a~~m./p.m. on February 24, 1983 in room 529-S of the Capitol.

All members were present except:

Committee staff present:
Ramon Powers, Research Department.

Conferees appearing before the committee:
HB 2424 - Representative Bill Brady.
Brian Moline, Kansas Corporation Commission.
HB 2243 - Representative Stephen Cloud.
Mari Peterson, Kansas Natural Resource Council.
Paul Johnson.
Brian Moline, Kansas Corporation Commission.
Jim Haines, Kansas Gas and Electric Company.

HB 2424 - An act relating to oil and gas; relating to fees of operators of natural gas wells.

Representative Bill Brady, sponsor of HB 2424, testified in support of the bill. He said the intent of the bill is to exempt the operators of a natural gas well with a total annual production not exceeding 150 mcf, used solely for personal consumption, from paying a $100 annual license fee. The operator would still be required to pay an annual license fee of $25 for each rig operated.

Brian Moline, general counsel for the Kansas Corporation Commission (KCC), testified in opposition to HB 2424. He said the KCC's main concern is to protect fresh and usable water, which is basically what the $100 fee is used for.

A brief question and answer period followed each of the presentations of testimony on HB 2424.

HB 2243 - An act concerning the valuation of certain property by the state corporation commission for ratemaking purposes.

Representative Stephen Cloud, key sponsor of HB 2243, testified in support of the bill. He said current law forbids the KCC from excluding any portion of a utility's property from their rate base. He noted that this bill would give the option to the KCC to exclude a percentage of the cost of a power plant from the rate base whenever the KCC deemed the ascertainment of such value necessary in order to fix fair and reasonable rates. He said that a provision in the bill limits this regulation to electric generating facilities having 1,000-megawatt design capacity or greater. He noted that, at the present time, the Wolf Creek Generating Station is the only electric generating facility in the state with that much capacity. He also referred to a pre-hearing before the Atomic Safety and Licensing Board, May 19, 1975, which was included in his testimony (see attachment 1).

Mari Peterson, Kansas Natural Resource Council, testified in support of HB 2243. She said the bill addresses two very important issues that Kansas must come to grips with: (1) how new power plants will be built in the state; and, (2) how Kansas Gas and Electric Company and Kansas City Power and Light Company will recover their investment in Wolf Creek. She provided background information regarding the two issues (see attachment 2).

Paul Johnson, Topeka, testified in support of HB 2243. He said he had

concerns about the costs associated with Wolf Creek and the affects those costs would have on ratepayers. He said the bill is a common-sense approach to setting fair and reasonable rates.

Brian Moline, general counsel for the KCC, testified in support of HB 2243. He noted that this bill would give the KCC authority to decide whether the ratepayers should bear the full brunt of the costs of Wolf Creek, or if the stockholders also have a share to bear. He noted that the KCC can only exercise the authority the Legislature gives them in regulating utilities under their jurisdiction.

Jim Haines, an attorney for Kansas Gas and Electric Company, testified in opposition to HB 2243 on behalf of the Electric Companies Association of Kansas. He said that a public utility is obliged to meet every financially responsible request for service within its service territory. He noted that this obligation means that a public utility must be willing and able to supply the needs of its customers on demand, at any time of day, at any time of year, year-in and year-out. Because it takes eight to 12 years to plan and construct a major generating facility, he said, a decision to build such a facility must be based upon information which, although currently the best available, is subject to change during that eight- to 12-year period. He said HB 2243 would prohibit the KCC from including in rate base whatever portion of a new 1,000-megawatt generating facility is not immediately used or required for use, even though eight to 12 years earlier, when the decision had to be made to build the facility, the best information available indicated that the facility would be necessary in order to provide adequate and reliable service to utility customers. He stated that another concern was if HB 2243 was to become law, it would encourage electric public utilities to build the smallest possible power plants despite their increased cost. He referred to a chart included in his testimony that indicated there are tremendous economic advantages to building the largest feasible generating facility (see attachment 3).

A brief question and answer period followed several of the presentations of testimony on HB 2243.

There being no further business to come before the Subcommitte, the meeting adjourned at 5:00 p.m.

The next meeting of the Subcommittee will be held February 25, 1983.

Rep. Keith Farrar, Vice-chairman

STATE OF KANSAS

STEPHEN R. CLOUD
REPRESENTATIVE, THIRTIETH DISTRICT
LENEXA, MONTICELLO TOWNSHIP
20727 WILDER
SHAWNEE MISSION, KANSAS 66218

TOPEKA

COMMITTEE ASSIGNMENTS
CHAIRMAN: GOVERNMENTAL ORGANIZATION
MEMBER: JUDICIARY
TRANSPORTATION

HOUSE OF
REPRESENTATIVES

TESTIMONY OF REPRESENTATIVE STEPHEN R. CLOUD BEFORE THE HOUSE SUBCOMMITTEE ON ENERGY RE: HB 2243 FEBRUARY 24, 1983

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE. I APPRECIATE THIS OPPORTUNITY TO TESTIFY IN FAVOR OF MY PARTIAL RATE BASING BILL, HB 2243. I WOULD LIKE TO QUOTE YOU A FEW SENTENCES FROM MY TESTIMONY BEFORE THIS COMMITTEE ONE YEAR AGO THIS MONTH. I WAS TESTIFYING THEN IN FAVOR OF A SIMILAR BILL.

"THE DECADE OF THE NINETEEN SIXTIES IS CHARACTERIZED BY SOCIAL PROTEST AND UNREST. THE DECADE OF THE SEVENTIES IS CHARACTERIZED BY THE OIL EMBARGO AND POLITICAL UPHEAVEL AT THE NATIONAL LEVEL. I WOULD SUBMIT TO YOU, LADIES AND GENTLEMEN OF THE COMMITTEE, THAT THE DECADE OF THE EIGHTIES IS GOING TO BE CHARACTERIZED BY UTILITY RATE INCREASES OF A MAGNITUDE THIS COUNTRY HAS NEVER EVEN DREAMED OF BEFORE AND BY PUBLIC OFFICIALS RUNNING AROUND ATTEMPTING TO DEAL WITH THOSE INCREASES. WE ARE GOING TO NEED EVERY AVAILABLE TOOL WE CAN GET OUR HANDS ON TO FIGHT THE BATTLE OF INCREASED UTILITY RATES."

MR. CHAIRMAN, I MAKE THAT QUOTE NOT TO APPEAR PROPHETIC, BUT SIMPLY TO MAKE AN IMPORTANT POINT. WHO WOULD HAVE DREAMED A YEAR AGO THAT GAS UTILITY RATES WOULD HAVE RISEN TO THE POINT THAT TWENTY-ONE REPUBLICAN HOUSE MEMBERS WOULD CO-SPONSOR LEGISLATION TO NATIONALIZE THE GAS WELLS AND THE GAS PIPELINES IN THE STATE OF KANSAS. I WOULD SUBMIT TO YOU THAT IF WE DO NOT ACT NOW TO ADDRESS THE FUTURE ELECTRICITY RATE INCREASES, WE WILL AGAIN BE TRYING TO ADDRESS THE PROBLEM AFTER THE HORSE IS OUT OF THE BARN.

CURRENT KANSAS LAW FORBIDS THE STATE CORPORATION COMMISSION FROM EXCLUDING ANY PORTION OF THE UTILITY'S PROPERTY FROM THE RATE BASE. IF YOU WILL NOTE ON LINES 22 THROUGH 24 OF THE BILL IT STATES, "THE COMMISSION SHALL HAVE THE POWER AND IT SHALL BE ITS DUTY TO ASCERTAIN THE REASONABLE VALUE OF ALL PROPERTY OF ANY COMMON CARRIER OR PUBLIC UTILITY." THE NEW LANGUAGE ON LINE 24 GOES ON TO READ,

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"OR WHATEVER FRACTION OR PERCENTAGE OF AN ELECTRIC GENERATION FACILITY PROPERTY." THIS BILL WOULD SIMPLY GIVE THE OPTION TO THE COMMISSION TO EXCLUDE A PERCENTAGE OF THE COST OF A POWER PLANT FROM THE RATE BASE, "WHENEVER THE COMMISSION DEEMS THE ASCERTAINMENT OF SUCH VALUE NECESSARY IN ORDER TO ENABLE THE COMMISSION TO FIX FAIR AND REASONABLE RATES." THE PROVISION ON LINE 26, LIMITING THIS PROVISION TO ELECTRIC GENERATION FACILITIES HAVING ONE THOUSAND MEGAWATTS DESIGN CAPACITY OR GREATER, SINGLES OUT THE WOLF CREEK GENERATION STATION, AS IT IS THE ONLY ELECTRIC GENERATION FACILITY WITH THAT MUCH CAPACITY.

IN ITS EARLY STAGES OF CONCEPTION, WOLF CREEK WAS ENVISIONED TO COST APPROXIMATELY FIVE HUNDRED MILLION DOLLARS. BY THE TIME THE UTILITIES ACTUALLY PUT A PENCIL TO THE ESTIMATED COST, IT HAD RISEN TO ONE BILLION DOLLARS. BY THE MID-SEVENTIES, THE PRICE WAS UP TO 1.5 BILLION, AND BY THE LATE SEVENTIES, THE PRICE HAD RISEN TO TWO BILLION DOLLARS. EARLY IN THE NINETEEN EIGHTIES, THE ANNOUNCEMENT WAS MADE THAT THE PRICE HAD GONE TO 2.45 BILLION. THE BEST ESTIMATES NOW ARE THAT THE TOTAL COST OF THE PLANT WILL EVENTUALLY END UP AT OR ABOVE THREE BILLION DOLLARS. IN ADDITION TO THOSE PROBLEMS, THE PLANT AT 1250 MEGAWATTS IS SEVERELY OVERDESIGNED. THE AMOUNT OF EXCESS CAPACITY THAT WILL BE IN THE SYSTEM WHEN WOLF CREEK FIRES UP IS STAGGERING.

THE QUESTION BEFORE US IS, "WHO IS TO PAY FOR THE COST OF THE MISTAKES SURROUNDING WOLF CREEK?" CURRENT LAW REQUIRES THAT ONE HUNDRED PERCENT OF THAT BE PICKED UP BY THE RATE PAYERS. MY BILL WOULD SIMPLY ALLOW THE STATE CORPORATION COMMISSION TO DISTRIBUTE PART OF THE EXCESS COST TO THE STOCKHOLDERS OF THE UTILITIES.

I HAVE PROVIDED EACH OF YOU WITH COPIES OF A PRE-HEARING BEFORE THE ATOMIC SAFETY AND LICENSING BOARD ON MAY 19, 1975. PARTICIPATES IN THE PRE-HEARING WERE, KANSAS GAS AND ELECTRIC COMPANY AND KANSAS CITY POWER AND LIGHT COMPANY, WITH THE STATE OF KANSAS, ALONG WITH A NUMBER OF OTHER GROUPS, AS INTERVENING PARTIES. I THINK THAT YOU WILL FIND PARTS OF THAT PRE-HEARING CONFERENCE VERY INTERESTING.

WE HAVE ALREADY WITNESSED GAS RATES IN THIS STATE FORCING PEOPLE OUT OF THEIR HOMES AND FORCING SMALL BUSINESSES INTO BANKRUPTCY. IF WE DO NOT ACT NOW TO CHANGE THE LAW, AND INSTEAD DECIDE TO FORCE OUR HOMEOWNERS AND SMALL BUSINESS PEOPLE TO SHOULDER MASSIVE ELECTRICITY RATE INCREASES, WE WILL SEE MORE BUSINESSES FORCED INTO BANKRUPTCY AND MORE FAMILIES FORCED OUT OF THEIR HOMES.

I URGE YOU TO RECOMMEND HB 2243 FAVORABLE FOR PASSAGE.

6/6/75

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
KANSAS GAS AND ELECTRIC COMPANY and KANSAS CITY POWER & LIGHT COMPANY	)	Docket No. STN 50-482
	)	
(Wolf Creek Generating Station, Unit No. 1)	)	

PROPOSED SPECIAL PREHEARING CONFERENCE ORDER

Pursuant to a notice and order issued by the Atomic Safety and Licensing Board, a special prehearing conference under 10 C.F.R. §2.751a was held in the above-captioned matter on May 19, 1975, in Lawrence, Kansas.

The parties to the proceeding appearing and participating in the special prehearing conference included the Applicants Kansas Gas and Electric Company and Kansas City Power & Light Company, the Staff of the United States Nuclear Regulatory Commission, and the following intervening parties admitted under 10 C.F.R. §2.714 through previous orders of the Board: the State of Kansas; Mid-America Coalition for Energy Alternatives; and, Wolf Creek Nuclear Opposition, Inc.

I-10. The analysis of the environmental impact for the WCGS by the Applicants is inadequate because Class 9 accidents (core meltdown caused by a loss-of-coolant accident together with an emergency core cooling system failure) are dismissed without detailed discussion in spite of the probabilities for such an incident being approximately 1 in 17,000 per reactor/year. (WASH-1400)

I-11. The Applicants' assessment of the Class 1-8 accident consequences which are contained in their Environmental Report is not sufficiently conservative because the radiation doses to the public in the event of the accidents which are evaluated are calculated only for a radius of 50 miles from the plant. The use of such radius, which excludes the large populations of Wichita, Kansas City and Topeka, is without basis and insufficiently conservative.

I-12. The Applicants' Environmental Report is inadequate in that it assumes a sufficient supply of uranium for the lifetime of the WCGS without demonstrating that such uranium will in fact be available.

I-13. The Applicants have failed to detail the extent to which an assumed fuel supply for the WCGS is dependent on the implementation of the breeder reactor program or the plutonium recycle program by the AEC. The dangers inherent in supplying fuel to a plutonium reactor have not been fully assessed, and such assessment is essential to the safety and environmental impact of the proposed facility. There should be no licensing of construction or operation of facilities which are justified in whole or in part by the nonexperimental recycle of plutonium prior to completion of the AEC's environmental review and final decision on plutonium recycle and the commercial use of the breeder reactor.

I-14. The Applicants' analysis of costs of the plant is inadequate and severaly underestimates the entire costs of the facilities in the following manner:

(a) Failure to account for costs relative to the environmental impact of the plant which will be imposed upon most persons who live near the plant during its operation and persons who work at the plant. At allowed rates of radiation releases, there will be a measurable impact on public health, safety and welfare, and on the environment, which ought to be included in a cost benefit analysis even though they will not be direct costs to the plant.

(b) An unrealistic assumption of the cost of borrowing money at the rate of 7-1/2% for construction of the project.

(c) An unrealistic assumption of a fuel cost of 5.7 mils/kwh.

(d) Overevaluating the average availability factor of the reactor in operation. For the first eight months of 1974, average availability factor for nuclear reactors was only 68.1% where "availability" is defined as the time the generator was in operation divided by the total time during the period. This is a slippage from the 1972 figure of 73% and the 1973 figure of 70%. The "capacity factor" of nuclear plants (which includes consideration of operating capacity as well as time on line) was only 56.6% through August, 1974 compared to 58% in 1973. Thus, there is no basis for the assumed 80% factor applied in the cost benefit analysis.

(e) Underestimating cost of fuel over the life of the plant in that Applicants have underestimated changes in the uranium, enrichment, fabrication and reprocessing costs.

(f) Underestimating increases in fuel, storage, and transportation costs because of the need to store waste fuel awaiting the availability of adequate reprocessing facilities. This cost should include deferred realization of the value of recovered uranium and plutonium at a discount of at least 8%.

(g) Failure to consider the likelihood of contingency costs for increased safety requirements, which cause changes in design and operation, and associated maintenance.

(h) Underestimation of anticipated decommissioning cost.

(i) Failure to consider a realistic escalation of costs in light of inflation in other factors by assuming only a 7% annual increase in plant labor cost and 7% for materials and service cost.

(j) Underestimate of waste management cost.

(k) Failure to account for the costs of decontamination of the site in the event of a Class 1-8 accident.

(l) Failure to consider the probability that the WCGS may be damaged by a tornado to the extent that it is either permanently removed from service or is removed from service for a significant length of time.

I-16. The Environmental Report fails to adequately evaluate the alternative of a cooling lake sized for one unit.

I-17. Applicants fail to adequately consider the use of an alternative site for the WCGS:

(a) which would be located near a large population concentration, in order that the inefficiency of nuclear power generation be compensated by making waste heat available for industrial or residential purposes; or

(b) which would utilize land already committed to electric power generation, specifically Belvue.

I-18. The Applicants' Environmental Report is inadequate in that an analysis of the alternative of a coal-fired plant, using either Wyoming or Kansas coal, to the proposed WCGS would show the coal plant as the favorable alternative with regard to (1) capital costs, (2) fuel costs, (3) operating and maintenance costs, (4) plant reliability, and (5) decommissioning costs.

I-19. The Applicants' projections of demand, and thus the assessment of the need for the proposed WCGS, are ~~inad~~equate and overstated because they fail to take

into account price elasticity of demand for electricity. The real price of electricity per kilowatt hour will increase, and will result in a decrease in demand from that predicted by the Applicants.

I-20. Applicants' assessment of demand for electricity fails to evaluate the increased availability of natural gas for residential and appliance use as gas ceases to be used as fuel to produce electricity.

I-21. The Applicants have not adequately considered the following alternatives which singly or in combination could so significantly reduce the demand in its service area as to eliminate the need for the WCGS:

(a) Institution of a conservation program in the Applicants' service area to reduce demand for electricity, particularly in light of the fact that present experience would indicate that such a program could achieve significant reductions in demand;

(b) Use of solar heating and cooling facilities in residences, which would reduce the projected power demands upon which the project is justified;

(c) Development of a peak shifting strategy for commercial and industrial customers;

(d) Development of a peak demand surcharge designed to discourage demand during peak hours;

(e) Reform or restructure of the current rate structures used by Applicants in order to provide an escalating charge for increased use of electricity;

(f) Expansion of usage of interruptible loads, which could significantly reduce the demand for electricity; and

(g) Purchase of power, sufficient to eliminate the need for the WCGS, from utilities with excess capacity.

Kansa
Natural
Resource
Council

5130 Mission Road
Shawnee Mission, Ks 66205
913 362-5933

Testimony before the
House Energy and Natural Resources Committee

Re: H.B. 2243

by

Mari Peterson

February 24, 1983

This bill addresses two very important issues this state must come to grips with. The first is how new power plants will be built in this state. The second is how KG&E and KCP&L will recover their investment in Wolf Creek.

During the last decade, price increases in all fuels spurred major conservation efforts. In addition, the nation plummeted into a recession at the end of the decade causing electrical demand growth to come to a halt. As utilities look into the future, they face uncertain electrical demand as well as scarce capital, available only at a high price. This is an ominous setting for such a capital-intensive industry. Prudent management will require a commitment to capital preservation among the utilities.

Capital preservation will mean utilities must do what is possible to extend the useful life of their existing plants. More pertinent to this bill, capital preservation requires new concepts in building electrical generating facilities. Utilities are going to need systems with higher availability and reliability. To meet these goals, electric utilities are going to have to consider building parallel, modular generating units in the future as opposed to single, large systems.

Smaller units (which may be several hundred megawatts in capacity) can be built in a shorter time frame -- roughly 5 years rather than the average 12 years needed for building large systems.

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This approach affords the utilities a much greater degree of flexibility in responding to changes in demand. In addition, the utilities can recover their capital costs more quickly. They will also experience greater overall reliability since an individual unit can be down for repairs with a minimal effect on the utilities' overall ability to meet customer demand. House Bill 2243 encourages this type of conservative management in the future.

In the nearterm, H.B. 2243 addresses the question of how KG&E and KCP&L will recover their investment in Wolf Creek. I want to make it clear to this committee that the Kansas Natural Resource Council is very concerned about this complex issue and its impact on the state. None of us can afford to take this matter lightly.

An underlying, very important question we must address is how elastic is the demand for electricity in this state? How will the customer respond to rate increases and how will this affect utility revenues? The answer depends in part on the competition utilities face and the state of the economy as it impacts customers' income.

In the 1980s, the electric utilities can expect to face competition from various sources including more efficient appliances and electrical motors, industrial interest in cogeneration, consumer efforts to reduce their air-conditioning requirements through insulation, weatherstripping, and shading devices, and possibly from other electric utilities, especially in terms of wholesale sales of electricity.

Let us assume that we place the entire value of Wolf Creek into the rate base upon its completion. The resulting rate increases may very well place KG&E and KCP&L in an uncompetitive situation. The price increases may be great enough to cause business, industry, and individuals to turn to competitive alternatives. If this happens to any great extent (which is totally feasible), KG&E and KCP&L may find themselves losing revenues with

each rate increase they enact. This could turn into a "spiral of impossibilities" -- a no-win situation.

There is another side to this coin. Lack of good information about alternatives coupled with capital scarcity may prohibit the residential, commercial, and industrial sectors from pursuing the competitive alternatives available to them. (Most of these alternatives require some degree of capital investment.) The high electricity prices together with high natural gas prices may bring small businesses and industries face to face with utility bills they simply cannot pay. Businesses and industries may have to close their doors. The effect on the utilities however will be the same as if these consumers had found the competitive alternatives. The utility rate increases will have forced a marked decrease in electrical demand and a loss of revenue for the utilities. Unfortunately, this scenario hurts even more people and it hurts the state as well.

Certainly there is no happy scenario in which everyone comes out ahead. The question is, how do we establish policy which will minimize the overall hardship by distributing the burden among more people, businesses, and institutions so no one sector is carrying the overall burden? Also, how do we best serve the state's interest in this situation?

If we presume the burden of shouldering this large capital investment is shared with the utilities' investors, the logical question is who are these investors? According to research I have done, the top 10 stockholders in KG&E and KCP&L are located out of state. In KG&E, these stockholders own 26% of the total outstanding shares of stock. In KCP&L, they control 29% of the stock. Institutional investors hold approximately 7% of the shares. The remaining 65% of the shares are held by thousands of stockholders. Who these people are is not public information. Certainly some of them are Kansans. The first point is, the largest stockholders are not Kansans. The second point is these stockholders will be impacted anyway when these

two utilities face loss of revenues from being thrust into an uncompetitive situation due to high electricity prices.

I cannot impress on you enough the seriousness of this situation. Essentially it boils down to an issue of equity and state's interests.

I am inclined to support H.B. 2243 because it gives the state and the corporation commission the opportunity to assess the elasticity of electricity demand and the impact high electricity prices will have on the utilities' revenue, as well as the potential for businesses and industries to absorb these rate increases without shutting down.

If the economy picks up and demand turns around, more of the plant can be put into the utilities' rate base. Ultimately they can probably earn a return on the full plant without losing customers in the meantime.

This matter can no longer be ignored. I urge you to pass H.B. 2243 out of committee so it can receive the attention and discussion it merits in the full House.

HOUSE BILL NO. 2243

STATEMENT OF JAMES HAINES

Electric Companies Association of Kansas

Good Afternoon. My name is Jim Haines; I am an attorney for Kansas Gas and Electric Company. I appreciate the opportunity you have given me to speak about House Bill No. 2243. My remarks this afternoon are on behalf of the Electric Companies Association of Kansas which includes The Kansas Power and Light Company, Kansas City Power & Light Company, Empire District Electric Company, Western Power Division of Centel Company, and, of course, KG&E.

House Bill 2243 would require the State Corporation Commission, in a general rate proceeding involving an electric public utility which had just completed a new 1,000 megawatt power plant, to exclude from rate base the value of whatever portion of the new plant the Commission determines to be in excess of system capacity requirements for the year in which the plant is completed and first considered for ratemaking recognition.

A fundamental characteristic of the public utility industry must be understood in order to fully appreciate our concern with House Bill 2243. A public utility is obliged to meet every financially responsible request for service within its service territory. This obligation to provide

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service means that a public utility must be willing and able to supply the needs of its customers on demand, at any time of day, at any time of year, year in and year out. This obligation to provide service means that a public utility, unlike other firms, has little or no choice as to when and to what extent it must invest in new facilities. In addition, because it takes 8 to 12 years to plan and construct a major generating facility, a decision to build such a facility must of necessity be based upon information which, although currently the best available, is subject to change during that 8 to 12 year period. House Bill 2243 would prohibit the Corporation Commission from including in rate base whatever portion of a new 1,000 megawatt generating facility is not immediately used or required for use, even though 8 to 12 years earlier, when the decision had to be made to build the facility, the best information available indicated that the facility would be necessary in order to provide adequate and reliable service to utility customers.

It is simply not possible to know with certainty what the demand for electric power will be 8 to 12 years in the future. House Bill 2243 would have a very chilling effect upon the willingness of the owners of electric public utilities to invest in the most economic new facilities even if the very best current information indicates such facilities will be necessary to be able to continue to provide adequate and reliable electric service in the future. To some people

that might be an acceptable, indeed desirable, result. When it is considered, however, that public utility services, especially electric power service, is indispensible to the health, safety, and comfort of individuals and the prosperity of commerce and industry, I believe that most people would favor a system which would not threaten the short or long run availability of such services.

The long term availability of adequate and reliable electric service is certainly a very significant consideration to those who are making business expansion or new business location decisions. Indeed, I refer you to the documents which are attached to my prepared remarks. The first is a December 17, 1982, letter to Ralph Fiebach, who was then KG&E's Chairman of the Board, from Robert W. Thompson of the Fantus Company, perhaps the most well known business location consulting company in the United States. Attached to the letter is an excerpt from a publication of that company called Fantus Focus. That excerpt indicates the importance to commerce and industry of an adequate and reliable supply of electric power. I would like to read part of the excerpt to you right now:

> Public utility capacity planning works within a time frame of approximately a decade from recognition of a future need to the completion of capacity to serve that need. Thus, relatively small errors in annual growth rate assumptions can result in substantial errors over a term of years. Current

> peak demand growth estimates, on a national basis, are about three percent per year. If actual growth in demand is only 1.5 percent per year greater than the forecast, in 10 years there would be a shortfall between forecast and actuality of 20 percent. This is as large as the entire reserve that many utilities are currently being advised to seek. Thus, the ability to meet our future needs for electricity hangs on a delicate thread of conjecture which is subject to possible errors significantly in excess of the ability of the system to correct in a timely fashion.

Now I want to move to another aspect of our concern with House Bill 2243. I am sure you have heard the expression that "a power plant is not built one megawatt at a time." Like all generalizations, that one is not entirely true. It is possible to build a one megawatt power plant and certainly, if electric public utilities built only one megawatt power plants, they would not run afowl of House Bill 2243.

To make the generalization entirely true we should change it to say that "power plants are not economically built one megawatt at a time." I should explain what I mean by that. Technological advances in the design and construction of power plants since the 1950's have permitted the maximum size of generating units to increase from approximately 100 MW to more than 1000 MW today. The increased size of new power plants permitted economies of scale to be obtained not only in their construction but also in their

operation. As a result, during the 50's and the 60's economies of scale were adequate to offset the modest inflation at that time, so that energy costs to the ratepayer were decreasing through the late 1960's.

While the unprecedented inflation of the late 60's and the 1970's caused the cost per kilowatt of new power plants to increase by 3 or even 4 or 5 times over the 1950's costs, economies of scale have continued to result in a lower cost per kilowatt as the size of a power plant is increased.

I have also attached to my prepared remarks a chart from a recent study prepared by Ebasco Services Incorporated, an internationally recognized company in the design and construction of power plants. That chart indicates that the 1982 cost of a 200 megawatt coal fired power plant escalated to projected 1991 costs is $3,235 per kilowatt. The comparable cost for a 1200 megawatt power plant is shown to be $1,825 per kilowatt. You can see from the attached chart that there are tremendous economic advantages to building the largest feasible generating facility. At the same time, however, if House Bill 2243 were to become law, it would encourage electric public utilities to build the smallest possible power plants, despite their increased cost.

Thank you.

The Fantus Company

a company of
The Dun & Bradstreet Corporation

Location Consultants

Robert W. Thompson
Senior Vice President

Prudential Building, Chicago, IL 60601
312-346-1940

December 17, 1982

Mr. Ralph P. Fiebach
Chairman of the Board
Kansas Gas & Electric Company
201 N. Market
Wichita KS 67201

Dear Mr. Fiebach:

The lead article in the enclosed issue of our publication Fantus Focus will be of interest to you. We at Fantus have worked with the electric utilities for many years, and have observed the efforts of most utilities to encourage industrial and other forms of economic growth in their service areas.

In this mileau, then, it has been disheartening for us to see the regulatory mechanism increasingly injecting itself into the new field of load and system growth planning. The 20-20 hindsight now being exhibited by many such agencies prompted me to write the article, and point out that, in the time frames within which electric utilities must plan, the present apparent system excess capacities of some utilities may be surprisingly fleeting.

You may recall a recent full-page advertisement run by the Edison Electric Institute, quoting our former Board Chairman on similar issues. We continue firmly committed to the attitude expressed by both of these publications.

Although the enclosed publication is being distributed to business leaders throughout North America, it obviously will not serve to ameliorate the problems of rate relief and system planning which face the industry. However, should there be any way we might be of assistance to your company, through assistance to your economic development activities, presentation of expert testimony on the small import of relative rate levels to industrial growth, or in other ways, I would be happy to discuss them with you at your convenience.

Very truly yours,

Robert W. Thompson

Robert W. Thompson

RWT/wj
Enclosure

Fantus Focus

A commentary on developments that affect decisions to consolidate, expand, build or relocate production, distribution and office facilities.

FALL 1982

Electricity for the Future

Until the 1970s, the policy of electric utilities in the United States was to encourage consumers to use electric energy. Throughout this same period, industries seeking new locations nearly always made the tacit assumption that ample electric energy would be available at plant start-up and that it would continue to be available to the murkiest reaches of the future.

These assumptions have been shattered in recent years. Almost everyone is familiar with the difficulties that have occurred in the Pacific Northwest, California, Florida and portions of the industrialized Northeast. The possibility of electric capacity shortfalls throughout much of the rest of the nation is less widely recognized.

Public statements, often by utility regulatory agencies and consumer protection groups, have indicated that electric utilities are building excessive capacity. In fact, during the winter of 1981-82 some entire reliability areas had reserve capacity margins in excess of 60 percent. Summer peak capacity margins are usually lower, but figures of 40 percent, or even greater, were also found in several regions this summer. For example, the New England Power Pool had a planned reserve in excess of 43 percent for the summer of 1982, the Oklahoma Group had a reserve in excess of 42 percent, and some other regions have nearly comparable figures.

How, then, is it possible to be concerned about future power adequacy in the United States? First, the reserves previously quoted are derived by adding the capability of every potentially operable generating facility in a region. They are, therefore, susceptible to numerous "corrections," including contracted sales of firm power to other utilities with less comfortable reserves, shutdowns for scheduled maintenance, forced outages resulting from various types of equipment failure and other causes, and other unavailable capability. When these adjusments are made, as they were by the Department of Energy in the summer of 1982, a severe potential shortfall situation is seen in many regions. Under these adjustments, four regions out of the 26 rated show a net negative adjusted reserve for nine or 10 of the summers from 1982 through 1991. Though these regions, which encompass parts of Illinois, North and South Carolina, Pennsylvania, and Ohio, are the most serious cases, they are by no means the only utilities groups with undesirably low or negative reserves.

Public utility capacity planning works within a time frame of approximately a decade from recognition of a future need to the completion of capacity to serve that need. Thus, relatively small errors in annual growth rate assumptions can result in substantial errors over a term of years. Current peak demand growth estimates, on a national basis, are about three percent per year. If actual growth in demand is only 1.5 percent per year greater than the forecast, in 10 years there would be a shortfall between forecast and actuality of 20 percent. This is as large as the entire reserve that many utilities are currently being advised to seek. Thus, the ability to meet our future needs for electricity hangs on a delicate thread of conjecture which is subject to possible errors significantly in excess of the ability of the system to correct in a timely fashion.

While we certainly do not believe that electric shortages will be experienced throughout the nation, attention to future power availability rather than present excess capacity is an increasingly necessary part of choosing the location for a new plant. In addition, an appraisal of the curtailment plan that the individual utility might impose upon its customers is of value in site selection. Different utility companies and different regulatory philosophies may create distinctions between areas where "turn off the industry" is the plan and other areas where all portions of society would be expected to bear their fair share of energy shortages.

CHART 9

UNIT SIZE INVESTMENT COSTS
ESCALATED TO 1991
($ Millions)

UNIT SIZE	INITIAL UNIT		EXTENSION UNIT	
ESTIMATING DATE-	1980	1982	1980	1982
200 MW (Subcritical)				
Direct Cost	444	544	348	409
AFDC	73	103	51	69
TOTAL PROJECT COST	517	647	399	478
	$2585/kW	$3235/kW	$1995/kW	$2390/kW
400 MW (Subcritical)				
Direct Cost	725	810	565	610
AFDC	125	162	88	109
TOTAL PROJECT COST	850	972	653	719
	$2125/kW	$2430/kW	$1633/kW	$1797/kW
600 MW (Subcritical)				
Direct Cost	925	1038	719	779
AFDC	176	228	124	155
TOTAL PROJECT COST	1101	1266	843	934
	$1835/kW	$2110/kW	$1405/kW	$1558/kW
800 MW (Supercritical)				
Direct Cost	1145	1284	877	962
AFDC	228	298	159	202
TOTAL PROJECT COST	1373	1582	1036	1164
	$1716/kW	$1977/kW	$1295/kW	$1455/kW
1200 MW (Supercritical)				
Direct Cost	1562	1750	1200	1310
AFDC	340	441	239	304
TOTAL PROJECT COST	1902	2191	1439	1614
	$1585/kW	$1825/kW	$1199/kW	$1345/kW

KANSAS GAS AND ELECTRIC COMPANY

LAW DEPARTMENT

March 1, 1983

Honorable Keith Farrar
House of Representatives
Topeka, Kansas 66612

Dear Representative Farrar:

When I testified in opposition to House Bill No. 2243 on February 24, 1983, before the Energy Subcommittee of the House Committee on Energy and Natural Resources, I supplemented my written remarks in order to respond to certain comments made by those who had earlier testified in support of the Bill. You asked me to provide those supplemental remarks in writing.

As you may recall, one supporter of the Bill testified that the planning for Jeffrey Energy Center was more prudent than the planning for Wolf Creek because of the smaller size - 680 MW - of the units at Jeffrey. I responded by pointing out that KG&E has a 20% interest in the Jeffrey Energy Center and would be the first to say that Jeffrey has been a well planned, efficiently operated facility. I went on to state, however, that the fact is that two 1000 MW units, built under the same circumstances as the Jeffrey units, would have had a lower cost per kW than the three 680 MW units which presently make up Jeffrey Energy Center. (Actually the third unit is not scheduled to begin commercial operation until June 1, 1983.) Although it would not be prudent for an electric company to have a generating system made up entirely of 1000 MW units, when a company's mix of generating units permits it to take advantage of the lower cost per kW of that size unit it would be imprudent not to do so.

In addition, I pointed out that KG&E owns only 47%, that is 540 MW, of the 1150 MW unit (Wolf Creek) which it presently has under construction. From the charts attached to my prepared remarks, one can see that it is clearly far cheaper for three companies to pool their resources to build one 1150 MW plant than to separately build two 540 MW plants and one 70 MW plant.

201 N. Market — Wichita, Kansas — Mail Address: P.O. Box 208 / Wichita, Kansas 67201 — Telephone: Area Code (316) 261-6297

Attachment #3 2-24-83

Each of the supporters of House Bill No. 2243 referred to KG&E's projected reserve margin at the time Wolf Creek is scheduled for completion as evidence in support of the Bill. I noted that KG&E's total system capacity in 1985, which is projected to have a reserve margin of more than 50% in 1985, will be composed of 540 MW of nuclear capacity, 1095 MW of coal capacity, and 1016 MW of gas/oil capacity. The gas/oil units will have an average age in 1985 of 31 years. The economic life of a power plant is usually considered to be 30 years. Moreover, gas and oil are the most expensive fuels for generating power. In view of the fact, then, that 38% of KG&E's projected total capacity in 1985 is made up of older gas/oil plants, KG&E's projected reserve margin of more than 50% in 1985 should not be interpreted to mean that Wolf Creek is unnecessary.

I appreciate the opportunity given me to testify before the Energy Subcommittee. If I can provide further assistance with respect to House Bill No. 2243, please do not hesitate to contact me.

Sincerely,

James Haines

James Haines

JH/mbs
cc: Members of the Energy Subcommittee