

## REGULATIONS

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Since its establishment some 36 years ago the Public Service Commission of Kentucky has from time to time adopted regulations governing the furnishing of utility services by those utilities under its regulatory jurisdiction. These regulations, generally speaking, prescribed the conditions under which the services would be provided, established standards of quality for the product being furnished whether it was a commodity or a service and established safety standards for the provision of all types of utility services.

The adoption of these regulations was not influenced to any significant degree by the adequacy of supply of any of the various utility services nor was the actual enforcement of the regulations, except in isolated cases, related in any way to the lack of supply. This is not to say that energy supply problems have never been encountered by the Commission. Some of you may recall the very serious gas supply shortages which occurred in sections of Southeastern Kentucky during the 50's and early 60's. These supply difficulties were caused by diminishing local supplies which could not provide adequate quantities or pressures over extended periods of cold weather. As was stated, there were isolated instances and did not relate to a statewide or industrywide shortage. In the mid 60's lines were constructed permitting the introduction of Southwest gas into these problem areas, which apparently eliminated any serious gas supply problems within our state. This was the case until it was recently made known that an industrywide gas shortage existed.

As regards electric energy, Kentucky is fortunate in that to this point in time its electric generating utilities have been able to meet their peak requirements with a reasonable margin of excess capacity. This has been possible since all of our regulated generating utilities are members of power pools giving them access to reserves many times those available from their own generation.

Four of Kentucky's generating transmission utilities are members of the East Central Area Reliability Coordination Agreement which was formed in 1967. This organization commonly referred to as ECAR, one of nine national groupings of power suppliers, coordinates the operation and the planning of generating and transmission facilities to assure abundant power for the present and future and to achieve maximum reliability and continuity of service consistent with environmental objectives. Because of ever increasing electrical energy needs, the plans of the ECAR group call for doubled generating capacity by 1980. Forecasts by all segments of the electric power generating industry in Kentucky indicate that adequate electric

power will be available for foreseeable future needs.

There has been no great change across the years in the regulation of the electric utility industry, but in recent years certain cost items have appeared and others increased markedly which have affected costs of operations substantially and, therefore, rates, and will, from all indications, increase further in the future. These new costs, as you are aware, relate to the installation of environmental protection devices. The cost of coal has escalated upward sharply.

Millions of dollars have been spent and are being spent by the generating utilities for the facilities necessary to meet existing particulate matter emission standards. As technology advances and methods for control of sulfur dioxide and other gases are developed, increasing amounts of capital will be required for control facilities, all of which will be, of course, reflected in the cost of the generated power.

One element of generating costs which has increased substantially over the past three years is the cost of coal. Those of you connected with the industry are aware that most electric utilities have included in their tariff for large power customers a fuel clause permitting them to adjust the rate under certain circumstances in accordance with the cost of coal. Until the last three years no substantial adjustments in these large power rates were necessary. However, since approximately June of 1969 the fuel clause has become a factor of major import in large power rates.

The upward swing of coal prices in 1969 has brought with it a relatively new concept in the regulation of electric rates, at least insofar as this state is concerned. This includes a fuel clause in all schedules of a utility's tariff from residential to heavy industrial. Such provisions are now included in the tariffs of some three to four electric distribution companies in Kentucky and have been requested by others who presently have rate cases pending.

The gas supply situation is, of course, much less favorable in this state as it is in most states. All major gas distribution utilities in Kentucky have adopted service restrictions which not only preclude deliveries to new industrial and commercial customers but also preclude increased deliveries to their existing customers in these categories. The seriousness of the problem was recognized by the Commission in a recent order in which a major gas utility was authorized to refuse service to new residential customers who will not be ready to take service by the first of the year and authorized volumetric limitations and certain

curtailments in connection with service to its existing commercial and industrial customers.

The Commission in that order also plowed a little new ground in directing discontinuance of service to existing ornamental flares, refusal of service to all new applications for outside ornamental flares and new outside gas lights and directing that the company cease all advertising and promotional efforts relative to the use of natural gas which might result in increasing the demand for natural gas service. The Commission also directed that the company initiate an education campaign to promote conservation of natural gas by all classes of customers.

I feel that it is in areas such as those set forth in the above order that regulation of utilities will differ in the future from what we have experienced in the past. As we move into an era in which demands for all types of energy will reach unprecedented levels, conservation of the various types of energy by all classes of customers will be imperative. Not only will the available reserves of electric energy and natural gas become more of a factor in the regulatory processes but the cost of energy to the customer may dictate conservation for his financial well-being.

Although because of advances in technology the eighty electrical generation units planned to be constructed by the ECAR group during the 1970's will provide more capacity than their existing 470, the cost to construct these new units will be at a much higher per unit cost. Also there appears no reasonable prospect for the cost of good quality coal which will permit operation of generating facilities in accordance with most air pollution standards to return to the cost levels of even four years ago.

The projected demand for additional gas is as striking as the estimates of demands for electric energy. It has been estimated that by 1995 the demand will reach 2 1/2 times the total gas used in 1970. The reasons for this tremendous increase in demand aside from the obvious needs of a growing population include expanding industrialization, economy, and cost, and concern for the environment, natural gas being a clean source of energy. While estimates of natural gas reserves vary, it is clear that large volumes of gas must be obtained from sources other than the historical sources of natural gas. Some of the widely discussed possible solutions are: (1) liquified natural gas; (2) synthetic natural gas; (3) coal gasification; (4) importation of natural gas by pipeline; (5) manufacture of gas from solid waste materials. Unfortunately, these sources of gas are either more expensive than the historical sources or are several years away in terms of development or both. In any case, it appears that whatever the solution or solutions to the existing natural gas shortage, the cost of gas to the consumer will increase.

The regulation of the utilities providing

the vast amounts of energy required to meet our future demands will necessitate constant monitoring of existing and projected sources of energy, both generated and purchased, natural and artificial to insure, insofar as possible, reserves in excess of demand. It will also require extensive education of the consuming public in energy conservation practices, and encouragement to follow such practices.

Now, let us look at the energy-environmental quality problem. State utility regulation has a new dimension of responsibility. Every energy decision will have to be balanced by an environmental impact decision. The citizens are demanding more energy and a cleaner environment. One role of government will be to balance these two certainties. How well the states handle these decisions in the short run will determine their role in the long run. In the near future in Kentucky you will see a close working relationship between the Public-Service Commission and the new Department of Environmental Protection. We will be regulating the rates and planning for increased public utility needs while they will be planning and regulating the environmental impact.

The role will not be easy, but we will give the citizens sufficient energy, with a cleaner environment, as reasonable as possible.

There is no need for me to go over the new environmental restrictions imposed during the last legislative session or the enforcement of them as you gentlemen are familiar with them, in some cases daily. I would like to discuss some new steps in the Research and Development area.

Upon my appointment to the Public Service Commission, I learned that I also became a member to the National Association of Regulatory Commissioners. Shortly thereafter I filled out a form of my special interests in utilities and was later appointed to the Ad Hoc Committee on Energy Research and Development.

This is a working and learning committee. I soon learned that the electric industry has no wide planned program of Research and Development, that you find many scattered research projects, usually repeating what some other research is being done, neither knowing about the other. This has been going on for a long period of time and has finally gotten down to the point that either the industry will have to do its own Research and Development or the Federal Government will enter the picture.

If the Federal Government does the research, they will have to tax the utility to pay for the cost of Research and Development, and this will be passed on to the consumers.

If the utility companies do the research, the rates will have to be raised to pay the increased cost, and this will be passed on to the consumers. Either way, the consumer will

pay, the question is who can do the best job at the lowest cost.

The electric industry feels that they can do the job better at less cost to the consumer and I agree.

I personally feel that the industry is the proper person to do the Research and Development and it now appears that industry and committee are in basic agreement on how to proceed. On August 31, 1972, the articles were prepared on Electric Power Research Institute, Inc. The Electric Power Research Institute, Inc., is similar to Bell Laboratory as they are to the telephone industry.

Now, how much will this cost? It is estimated that eventually as much as 0.1 mill per kilowatt-hour sales for each member utility company. On September 14, 1972, 48 Edison Electric Institute member companies pledged support to the program amounting to \$36.6 million or 48.7% of the \$75.1 million for 1973, which would be realized if all E.E.I. members were to participate according to the recommended guide lines for funding. It appears that rather soon there will be an Electric Power Research Institute, Inc. or something similar in operation and Public Service Commissioners will have to increase rates for Research and Development.