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A CITY INVESTS IN ITS FUTURE

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Mr. Baker describes events occurring during the past four years which led to the City of Burbank's decision to acquire an energy source adequate for the city's present and future power requirements. The community reaction to this unprecedented move is also covered.

Burbank's long-range plans for the development of geothermal energy are outlined as well as the challenges which confront a public utility in implementing its projected goals. However, Baker cites several advantages accruing to the city which in the opinion of the Burbank City Council and the administration justify this venture. He cites the need for a cooperative climate which will enable all electrical utilities to better meet their obligations to the public, which is their prime responsibility before all other considerations.

This paper, unlike others which have been presented during this conference, is not addressed to the technical aspects of geothermal energy, but deals specifically with "why" the City of Burbank embarked on its own "Project Independence."

I will be the first to acknowledge that this is a most unusual undertaking for a municipality, but we feel that the events which prefaced our entry into the procurement of geothermal leaseholds justify our action. Some data concerning the City and its electrical utility might be of help in understanding this action.

Burbank, California, incorporated in 1911, is located in Los Angeles County. Our community owns and operates an electric power generation transmission and distribution system for the benefit of major industrial and commercial establishments and a resident population in excess of 87,000. Included among the large industries serviced by the Burbank electrical utility are Lockheed Aircraft Corporation, the National Broadcasting Company, Walt Disney Productions, The Burbank Studios (Warner Bros. and Columbia Studios), General Controls, Inc., Zero Manufacturing Company, Menasco, Inc., etc.

The electric power used within the City of Burbank is 788 million kilowatt hours annually. The generating plant has a total capability of 260 megawatts, produced by a combination of gas turbine and steam-electric units ranging in size from 10 to 55 megawatts. These units are designed and

constructed to use natural gas as a primary fuel and to burn residual fuel oil as an emergency or standby source.

The severity of the problem which confronted the City of Burbank during the latter part of 1973 cannot be fully understood without some additional explanation of what occurred in prior years. It is important that events leading to our decision be described.

In the early 1960's, Southern California electric utilities made an attempt to obtain natural gas supplies for the exclusive purpose of electric power generation and to bring those supplies from gas fields located in South Texas through new transmission lines. Opposed to the plan were El Paso Natural Gas Company, Trans-Western Pipeline Company, and Pacific Lighting companies, which include the Southern California Gas Company. These companies intervened before the Federal Power Commission and the California Public Utilities Commission to prevent the construction of the transmission facility. They maintained that there were adequate supplies of gas available through their facilities to supply the needs of the electric utilities through the 1980's and that the building of additional gas transmission facilities would be an unnecessary and costly duplication. In testimony given before the regulatory agencies, statements were made by the gas suppliers that the initial price of 45 cents per million Btu's for delivery of the new gas was excessive and would place an undue burden upon the consumers in the areas to be served. On the basis of these reports, the regulatory agencies denied construction permits to build the required transmission facilities, and the gas supply then available for the new facility was subsequently channeled in other directions.

In 1970, the City of Burbank was advised by its gas supplier that we would no longer be able to receive natural gas in the quantities necessary for our generating purposes. From a natural gas supply of 73% of our required fuel, our gas supply for 1974 is estimated to amount to only 23% of our fuel requirements. This restricted supply of gas has rendered this fuel secondary, or supplemental, and forced the City of Burbank to rely on the oil companies as a primary source, increasing our demand from approximately 285,000 barrels per year to 1,200,000 barrels per year since 1970. As our need for increased supplies of low sulfur fuel oil continued, a small independent refiner kept pace with the needs of the city until November, 1973, at which time we were advised by the company that it could no longer supply us with low sulfur fuel oil and would terminate the contract with the City because its source had withdrawn the supply of crude. Despite continuing efforts on the part of Burbank to obtain a contract we have not, as of this date, been able to obtain any firm commitment for the delivery of low sulfur fuel oil.

We had come to realize prior to the time our contract was canceled that an energy shortage was imminent. However, like all organizations, we, too, find it difficult, if not impossible, to take definitive preventive measures before a crisis exists. Even though the price of low sulfur fuel had increased by almost 300% within a six-month period of time, we were unable to mount an effective campaign for energy conservation on a community-wide basis until we were notified that our contract had been canceled. Concurrently with the cancellation of our contract, Burbank approved a mandatory energy conservation

ordinance which became effective November 26, 1973, and is still in operation today. The Burbank mandatory curtailment program is so effective that we have led the nation in percentage reduction of power usage, and we cannot remove these most stringent restrictions until we have an assured supply of energy for the generation of power.

The City of Burbank also began to search for areas which might give us a reliable source of fuel. We investigated the feasibility of buying into a refinery; we considered entering into an oil exploration venture; and we examined the possibility of contracting directly for oil refined outside the Continental United States. While nothing came of these inquiries, we did lay the groundwork for what was to happen later — our entry into the geothermal energy field.

While we were knowledgeable as to the progress being made in this field, we had not seriously considered geothermal energy as an alternate fuel source until a discussion was held in December of 1973 with Dr. Robert Rex, President of Republic Geothermal, Inc.

These talks progressed rapidly, and the Burbank City Council on January 18, 1974, authorized the submittal of bids for land in three known geothermal areas (KGRA) which were made available on December 18, 1973, by the Secretary of Interior for competitive lease bidding. Quotes were also authorized for other lands categorized as possible geothermal land being offered by the Department of Interior. Our proposals for three KGRA's were accepted, and Burbank found itself plummeted into a new era with geothermal land holdings in the Mono Lake - Long Valley area in Central California and the East Mesa area of Imperial Valley in Imperial County, California.

The City of Burbank has been chastised and lauded for this action. Some have thought the city was courageous, while others were outraged that a municipality would have the audacity to enter into this field.

We moved into this venture with full knowledge of the benefits that could accrue to the city and were also aware of the future that awaits those who invest public monies in any project that fails to materialize — especially a "risk venture." However, the City of Burbank had pioneered before — first, with charter membership in the Southern California Metropolitan Water District; later contracting for electrical power in excess of its needs from the proposed Boulder Dam; and finally, in 1966, investing in the Northwest DC Intertie Line for excess power from the Columbia River Basin. These ventures, too, were considered by some to be courageous and by others foolhardy, especially those projects which were entered into during the 1930's. The end of 1973 found us facing a similar situation.

The City Council action authorizing our entry into the geothermal field was made with many reservations. One unspoken question was, "How will the public accept this decision?" They did not have long to wait for the verdict — the reaction was overwhelming in favor of the decision made by the City Council. Letters from individuals, editorials in the local press, communications from civic clubs, and a resolution adopted unanimously by the Board of Directors of the Burbank Chamber of Commerce endorsed their action, and urged

the City to proceed forthwith. Only a few critics came forward to berate the Council for the initial expenditure of \$1.2 million, or for encumbering the City with a long-term financial obligation for the development of this energy source.

I would advise other governmental agencies to take note of this public reaction, as I believe this illustrates why the "do nothing," or the "let's wait and see" attitudes meet with a great deal of criticism from the electorate at the local level of government.

You might be asking yourself why we, as a city, would make this decision in view of the long-standing precedent that when the situation becomes grave someone will bail us out. Such a question is valid and deserves an answer.

First, our research indicated that we had only encountered the first symptoms of an energy crisis and that this situation would gradually worsen over the long-term future. Second, we knew that we were not considered as a high-priority customer by any supplier of fossil fuel. Third, we realized that due to the age of our equipment a replacement program had to be initiated within the next ten years. Fourth, it was obvious that additional generating capacity would be required to meet the ever-increasing power requirements of the community. Fifth, we realized that storage for fuel was critical. Sixth, we had enough experience with the Air Pollution Control Board and with the various "clean air" groups to realize that the electric industry was not going to be given "carte blanche" permission to operate in a densely populated urban area indefinitely. Seventh, we knew that alternative sources of electrical energy, such as coal fired and nuclear would not be available in the immediate future and, when available, might be prohibitive in cost; and, eighth, it was obvious that the Environmental Protection Agency would require the installation of desulfurization equipment when and if we were allowed to burn high sulfur fuel oil, and that this would be a most expensive undertaking.

A previous recommendation had been made to the City Council advising that if we were to maintain our standards for providing electrical service, it would behoove the City of Burbank to acquire an energy source. This source would provide the assurance that we would have a permanent supply of fuel for generation purposes; that only then would we be in a position to supply electrical power to our customers at the lowest possible cost, and that other problems connected with aging equipment, future environmental control regulations, and the approval needed for the replacement or installation of additional electrical generation capacity within a metropolitan area would be avoided. Therefore, it was decided that the City of Burbank should take advantage of the opportunity to enter into the geothermal field, thereby minimizing our future problems with a planned program of transition, expansion, and independence.

Our third objective, independence, should be welcomed by many industrial representatives attending this conference. Projected requirements indicate that there will be more than enough demand for all available energy even if a large percentage of the public utilities would cease being a customer within the next ten years — however unlikely that might be — and it appears a program similar to the one Burbank has initiated should be encouraged further. However, this has not happened.

The facts indicate that similar action is not being encouraged and, further, the cities are not being consulted. By way of an example, it is interesting to note that the Federal Administration's response to the problem — "Project Independence" — a program whose impact on cities will be quite substantial, excludes the participation of local elected and appointed officials who have an important interest in the shaping of this national strategy. The chief managers of the nation's urban environments, where virtually all of the social, economic, and environmental consequences of the expanded energy source development will become manifest, have been effectively eliminated from meaningful participation in the development of this plan.¹

The very fact that municipalities have been excluded from the establishment of national policy makes it more imperative that Burbank proceed with the development of geothermal as our prime source of energy for power generation. We have taken, and we will continue to take an active role in attempting to influence the legislation relating to geothermal energy being considered by the Congress. We have been interested specifically in assuring that equal consideration is given to municipalities and public utilities in all public laws which relate to the exploration or development of geothermal energy. We propose to maintain our interest in future legislation of this type.

Further, while the City of Burbank entered into the geothermal field in an attempt to solve a very perplexing problem facing one community, we are also interested in cooperating with other participants, public or private.

Burbank's situation is insignificant in comparison to energy shortages facing other municipalities located in Southern California, and the energy problems facing municipalities in Southern California are overshadowed by those facing this nation. I would hope that the practices of the past could be set aside; that the long-term disputes between public and investor-owned utilities could be ended; and that past priorities could be reevaluated in order that we can maximize all of our energy resources for the benefit of the public. This is our first obligation, and also our joint responsibility.

¹"Doubts Surfacing About Administration's Energy Program", City Perspective, National League of Cities and U. S. Conference of Mayors, August 1974.