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U. S. DEPARTMENT OF THE INTERIOR
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Program time-usually Chairman asks us to curtail, for reason-like Egypt Mummy - Pressed for time
Water town scheduling expert - get me off individuals.

This is one of my first speaking appearances before a major power

I certainly would be remiss if I did not begin by saying that you--who are the preference customers for power produced by the mighty Missouri-

That era gave rise to a number of innovative programs that have

One of the new Federal programs originating in that era was the REA. The
One very obvious evidence of the influence your particular group has had on Missouri River Basin development is the general absence of power outages and the total absence of brownouts in the Basin. We in Washington seldom hear of power failures and hear little or nothing of shortages in your area. This would indicate that transmission systems are reliable and generating resources are adequate. The outage/experienced several weeks ago in the Fargo-Grand Forks area is an exception, of course, and our good neighbors to the north must accept primary responsibility for that one. On the other hand, in connection with such places as Chicago, New York, and the Northeast, we have repeatedly heard of numerous instances of power curtailment because of severe shortages of power and energy. Back in September, when the East, including Washington, D.C., was having one of its more serious shortages of electrical power, many kilowatt-hours of Missouri Basin energy were being diverted to relieve that emergency. We transplanted westerners now residing in Washington want you to know we appreciated your help.

Much of that trouble was due to large equipment failures, and it was compounded because new unit installations had repeatedly fallen behind schedule. On top of that, shortages in other forms of energy, such as gas, oil, and low-sulfur coal, further accentuated the problems.

In the Missouri River Basin the availability of hydropower has gone a long way toward assuring an adequate power supply to meet the needs of the people of the Basin. There is no doubt that hydropower availability has brought about widespread and dramatic changes in the way of life in the Basin. But also, there is no doubt that the favorable power situation in the Basin today is the result of the work and accomplishments of pioneers such as yourselves.
The Pick-Sloan Plan (Missouri River Basin Development Program) combined the thinking and visions of many early-day pioneers in the Basin. Much of that thinking has today become reality in the form of hydropower production, recreation, irrigated farms, fish and wildlife enhancement, water quality control, and municipal and industrial water supplies. The continued and extended realization of each and every one of these interrelated benefits requires that the various interests continue to coordinate their efforts toward accomplishment of the multifaceted goals. The people of the Basin have repeatedly demonstrated their willingness to do this.

In fact, the success story of Missouri River Basin power development stands in testimony of the worth of "working together for the common good." In the late 1950's and early 60's the preference customer representatives—and many of them are here in this room today—realized that hydropower production on the Missouri and its tributaries was limited. Along with that realization, they recognized that, if the demands and load requirements of the future were to be met, it would be necessary to rely on some other form of generation. With that knowledge as the motivating force, representatives of the preference groups got together with representatives of the Bureau of Reclamation and the Rural Electric Administration to formulate a plan. The plan that evolved was to build a large-scale steamplant on the lignite fields of North Dakota and use the Bureau's excess transmission capacity to deliver power to load centers. To implement the plan, over 100 preference customers executed the Missouri Basin Systems Group Pooling Agreement in 1963. Simultaneously, the Bureau executed a contract with the Basin Electric Power Cooperative which was based on the Pooling Agreement.
AND PROVIDED FOR BASIN'S USE OF THE FEDERAL TRANSMISSION SYSTEM TO DELIVER POWER FROM THE PROPOSED 200-MEGAWATT LEWALD OLDS THERMAL POWERPLANT.

THE SUCCESS OF THE IMPLEMENTED PLAN PAYS HIGH TRIBUTE TO THE FORESIGHT OF THE SYSTEMS GROUP SPONSORS. THE FACT OF AN ADEQUATE SUPPLY OF POWER CONSTRUCTION OF BASIN ELECTRIC'S SECOND PLANT AND THE MARKETING ARRANGEMENTS FOR SEASONAL SALE OF SUMMER AND WINTER PEAKING POWER ARE CONTINUING EXAMPLES OF THE COOPERATIVE AND EFFECTIVE ROLE BEING PLAYED BY THIS GROUP.

CERTAINLY THERE HAVE BEEN PROBLEMS AND DIFFICULTIES ALONG THE WAY, BUT THE PLUSES GREATLY OUTWEIGH THE MINUSES.

THE AVAILABILITY OF THERMAL GENERATION IN THE JOINT SYSTEM HAS BEEN OF GREAT BENEFIT. IT HAS BEEN POSSIBLE TO BLEND HYDROELECTRIC AND THERMAL POWER BY TAKING ADVANTAGE OF THE PEAKING AND BASELOAD CHARACTERISTICS OF THE TWO TYPES OF GENERATION. IT HAS ALSO BEEN POSSIBLE TO COMBINE EXCESS THERMAL AND HYDRO GENERATION AND MAKE BENEFICIAL SALES TO PRIVATE UTILITIES. BY THIS PROCESS, MARKETABILITY OF THE PRODUCT HAS BEEN ENHANCED AND BASIN ELECTRIC'S LEWALD OLDS STEAMPLANT HAS BEEN KEPT FULLY LOADED.

TODAY, IN THE DECADE OF THE 70'S, POWER DEVELOPMENT IN THE MISSOURI RIVER BASIN AS WELL AS NATIONWIDE FACES A FUTURE THAT WILL REQUIRE MONUMENTAL DECISIONS. IF THE BASIN IS TO CONTINUE TO HAVE AN ADEQUATE, RELIABLE POWER SUPPLY, THEN NO SEGMENT OF THE ELECTRIC INDUSTRY IN THE BASIN CAN AFFORD TO PROCEED INDEPENDENTLY. INDEPENDENT, UNCOORDINATED, AND FRAGMENTED APPROACHES TO THE CONSTRUCTION OF POWER FACILITIES ARE INEFFICIENT AND COSTLY.

THE SYSTEM OF POWERPLANTS, TRANSMISSION LINES, AND SUBSTATIONS THAT HAS DEVELOPED IN THE BASIN PROVIDES A SOLID BASE FOR THE GROWTH THAT CAN BE EXPECTED. THE ENORMOUS DEPOSITS OF LOW-SULPHUR-CONTENT COAL COUPLED WITH THE AVAILABILITY OF WATER, PROVIDE A TREMENDOUS OPPORTUNITY FOR POWER DEVELOPMENT.
Development, community development, and economic expansion in the Missouri River Basin without parallel, and I might add that the only real justification for such development is for the benefit of people.

In speaking a moment ago of earlier pioneering accomplishments, I want to emphasize that the pioneering attitude has not been abandoned nor lost. The same fortitude and tenacity demonstrated by Systems Group members in joining together to develop a power resource to augment hydropower is reminiscent of the pioneer spirit of yesteryear. That spirit and determination are again portrayed by your actions and support with respect to formation and cooperative conduct of the North Central Power Study which was launched by Assistant Secretary James R. Smith in May of 1970.

Many of your people are actively participating on committees involved in that study and are serving in leadership capacities.

The study requires and is getting the cooperation of all power-supply organizations, including investor-owned utilities, consumer-owned cooperatives, public power districts, municipalities, and the Federal Government. Such cooperation is essential to continued progress of people in the Missouri River Basin and again demonstrates the theme “Joining together for the common good.”

The study group is so organized that a Coordinating Committee, through a Steering Committee, has the basic responsibility of providing management surveillance and insuring that the study is completed expeditiously and realistically. The Coordinating Committee is composed of 36 members representing practically all the electric power systems in the North-Central part of the United States and the Rocky Mountain area. It has a study manager who directs the day-by-day activities of the study. There are approximately 38 working committee members and 37 task force members, and all have recognized competence in their professional fields.
Stakes are high in this joint power effort. The study, which rates as one of the largest ever undertaken, is designed to determine the economic and practical feasibility of developing large-scale, mine-mouth, thermal generating plants in the enormous coal fields in this area, and transmitting bulk power by high voltage lines to load centers both to the East and West.

The study is on schedule. The target date for completion is about October of this year. Findings will be reviewed by all, and subsequent activity will be based on indicated interest of potential participants.

Strippable coal is there—300-billion tons of it. Water will be needed for operation of the steam powerplants and for other purposes.

Region 6 of the Bureau of Reclamation, under the direction of Harold Aldrich, is conducting a parallel study to determine both the availability of water and its cost of delivery. He reports that the supply is plentiful, and the cost will be reasonable. The Bureau is investigating the feasibility of constructing and operating aqueducts (including necessary pumping plants) to deliver water to the coal fields and related industrial areas. Assuming feasibility can be shown, such proposals will be recommended to the Congress for authorization.

Another matter of considerable interest to this group is that of the East-West ties. To many of you this has been and is a major problem area; therefore, I think a brief history of the ties is in order. In the beginning, there were two electrically isolated areas in the Eastern Division of the Missouri River Basin Power System. Canyon Ferry's 50,000-kilowatt plant, which was completed in 1954, was interconnected with Fort Peck's west bus. The major part of Fort Peck was connected to the East. Because the East-West
ties were open and there was no connection between Canyon Ferry and the main Missouri River Basin system; the Canyon Ferry plant was a "captive plant," power was sold at dump rates and water was often spilled.

After a study of benefits to be derived if Canyon Ferry were interconnected with the main system, a test closure was made at Fort Peck in 1957 for the purpose of collecting additional technical data. From those data it was concluded that before a permanent interconnection could be maintained, it would be necessary for both systems to be on the same frequency and load control basis. At that time, the West was on flat-frequency control, while the East was on a tie-line bias control—the two were not compatible.

Following conversion of the western system to tie-line bias control, closure tests were again made in 1962, followed by additional tests in 1963. After gathering more information and making some improvements in the power systems on both sides, the ties were closed in early 1967.

They were opened again in a few months because of intolerable disturbances suffered by adjacent power systems. Later that year, after development and installation of a special relay to control openings of the interconnection, the ties were again closed and subsequently operated normally closed.

The benefits obtained from closure of the ties make it desirable to keep them closed whenever there will not be undue harm to the involved operating utilities. Some of these benefits are (a) increased power reserves for the area, (b) ability to move power from North Dakota to South Dakota, Nebraska, Colorado, and Wyoming; and (c) flexibility to move power from surplus to deficit areas. A further incentive to keep the ties closed is Canyon Ferry.
If the ties were to be opened and kept open, Canyon Ferry would again revert to a partially "captive plant." In the main, adequate transmission facilities to tie Canyon Ferry to the East do not exist. However, due to improved marketing conditions, the degree of captivity would be considerably less than that of the pre-1957 era.

We have come a long way since the first test was made in 1957. As specific problems have arisen, we have endeavored to find cures that would allow satisfactory operations. We have not always been completely successful in this regard, but by and large considerable progress has been made. In the future we propose to continue to operate the ties closed during all periods that system conditions will permit. Whenever operating problems occur or appear imminent, the ties will be operated open. We shall continue to study and explore ways and means to alleviate or eliminate problems. These efforts will include a willingness to work with all concerned parties in reaching desirable objectives.

I have painted a fairly bright image of the power picture in the Basin today. This optimism prevails in significant degree because of the efforts of people such as you. But no matter how bright the picture comes through, we cannot "rest on our oars" believing our work is done. We must continue to plan not only within the group, but jointly and cooperatively with all other involved entities. We must utilize our facilities to the best interest of all. We must learn to swing with changing patterns, and we must join with others to meet the problems of the future just as squarely and effectively as we have met those of the past. Power problems in the Basin are of mutual concern, and they must continue to be solved in a mutually satisfactory and
beneficial manner. It appears to me that this is being done in the Basin, and that the Systems Group represented by you folks here today, is playing a significant role. Keep up the good work.

Thank you