Public Power

Appropriations: Head of the Antelope Transmission Lines

United States Senate

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS

September 30, 1964

Dear Mr. Secretary:

One of the truly significant achievements of this Congress in our estimation, was the approval of funds to begin construction of the Northwest Pacific - Southwest Pacific extra-high-voltage intertie.

We strongly supported the Department in this endeavor because it represents an important new step forward in transmission technology and because it will bring billions of dollars of benefits to consumers in the form of abundant, low-cost energy. We understand that consumers of about 250 cooperative, public and municipally-owned systems in 11 far Western states will share heavily in the $2.6 billion of total estimated benefits. We are happy to have been able to support the Department and its agencies in this and its many other programs.

Now that the West Coast intertie has become an active part of your program, we should move ahead immediately with another intertie that will bring widespread benefits to consumers of the states we represent and to the Northwest as well. We refer to the proposed interconnection between the systems of the Bonneville Power Administration and that of the Bureau of Reclamation's Missouri River Basin. Such an intertie would, in our opinion, bring about the maximum utilization of Federal investment in the facilities of these systems and generate substantial benefits for consumers through power exchanges, making it possible to take advantage

of diversities in time zones and river basin flows.

It has now been two years, as we recall, since you announced a study of this interconnection. We should like to know how far along you are with these studies and when they will be completed. We hope that the appropriations bill for fiscal year 1966 can include funds to get this project under way.

Sincerely yours,

The Honorable Stewart L. Udall
Secretary of the Interior
Washington 25, D.C.

File
TVA

CHATTANOOGA AND TVA POWER

By
G. O. Wessenauer, Manager of Power
Tennessee Valley Authority
Before the
Chattanooga Rotary Club
Chattanooga, Tennessee
June 4, 1964

It is a privilege for me to meet with you and to discuss TVA's power program.

At times I have the feeling that TVA is better known in other parts of the world than it is right here at home. Probably this is largely our fault because we have not reviewed our general program with local groups at frequent enough intervals.

Frequently we talk with visitors from other parts of the United States, or from distant parts of the world about the TVA power program. Literally thousands of foreign visitors have passed through our offices in Chattanooga. They come to see what lessons there are to be learned from TVA which they can apply in their own countries. We try to give them an understanding of how the people through their institutions can help in developing a region's basic natural resources so that

> the democratic processes may be strengthened,
>
> the initiative and responsibilities of local government and other local institutions may be encouraged and developed,
>
> and private enterprise and private initiative may flourish.

The manner in which Chattanooga and other communities in the Valley

work with TVA and with each other, and the purposes for which they work, offer fruitful examples for those who wish to study the way a democracy operates. Such examples are important for those people who, confronted by opposing ideological concepts, are impatient for more rapid economic progress.

The impact on Chattanooga of TVA's varied resource development programs would make an interesting discussion for a Chattanooga audience. The navigation channel created by TVA's multipurpose dams brings important savings on shipments in and out of Chattanooga, and it has attracted a number of important industries to locate along the river's banks. Flood control provided by these same dams has averted damages estimated at more than $250 million at Chattanooga alone. And TVA's dams have created important recreational opportunities for the people of this area. In talking with you today, however, I will confine myself primarily to only one of those programs--the power program.

During the years I have lived here, Chattanooga has come to be called the "Electrical Center of the Nation," a slogan which is justified by this city's abundant use of electric power. And during these years TVA's power system has responded to the growing power requirements of Chattanooga and other communities in the region by building more and more power facilities until, today, the TVA is called upon to produce twice as much electric energy as the next largest system in the Nation.

Our own Chattanooga Electric Power Board has had outstanding success in

promoting the use of electricity. Annual use has grown to nearly 3 billion kilowatt-hours a year. This is well over seven times the annual requirements when the Power Board began serving the city, and it is twice as much as the entire 80,000 square-mile area now supplied with TVA power used when TVA started its program 31 years ago.

On the average, homes in Chattanooga use nearly 16,000 kilowatt-hours a year. This is 3-1/2 times the national average and is truly a fine achievement. This unusually high use results largely from the very high proportion of homes which are all-electric, using electricity for heating and cooling as well as for the more traditional home appliances.

The growing power requirements of Chattanooga, Nashville, Knoxville, and the many other cities and towns and rural areas of the Tennessee Valley have caused TVA to build power generating facilities more rapidly than any other system in the Nation. In the early years, it was possible to meet the region's growing requirements through the installation of power generating facilities in the multipurpose dams, such as Chickamauga, which are a part of the over-all program for the unified development of the Tennessee River.

Altogether, TVA has built 21 major dams. Most of them are large, multipurpose projects which serve the region in diverse ways. Construction of number 22--Nickajack Dam, 25 miles downriver from Chattanooga--has just started. The TVA power system also receives most of

the power output of dams built on the Cumberland River by the Corps of Engineers. A number of dams built by the Aluminum Company of America to serve its Alcoa, Tennessee, plants are operated as part of the TVA system, and the company receives from TVA power equivalent to that produced at its plants. There are 32 major hydro plants contributing power to the TVA system.

Even though TVA had some generating capacity in steam plants, through transfer of the facilities at Wilson Dam and the acquisitions of the late 1930's, by the end of World War II TVA had erected only one new steam plant--the Watts Bar Steam Plant. As recently as the early fifties, we were relying primarily upon the hydroelectric capacity.

About then, however, most of the potential capacity of the river had been developed, and to meet the power needs of the region TVA turned to the use of another basic resource of the region--coal. The need for steam plants was compounded by the incredibly large power requirements of the Atomic Energy Commission. Their loads reached a peak around 1957. In that year the Commission purchased 55 percent of all the power TVA sold. In only four of the 48 states was more electric energy used than was supplied AEC by TVA.

Thus, to meet the region's expanding need for power, TVA has built or is building 10 steam plants, 9 of which are among the largest and most efficient producers of electric energy in the world.

These hydro and steam generating plants are major projects and several of them are close enough to Chattanooga that their construction had some direct impact on the economy of this city. Chickamauga Dam, of course, is the most obvious. But both the Watts Bar Dam and the Watts Bar Steam Plant are near enough to have had some impact. And the Widows Creek Steam Plant at Stevenson, Alabama, is barely an hour's drive. A large part of the labor supply and personnel to construct and operate this plant were recruited from Chattanooga and vicinity. Incidentally, when unit number 8 is placed in service at Widows Creek later this year, that plant will supersede TVA's Kingston Steam Plant as our Nation's largest. Its installed capacity of 1,675,000 kilowatts will be 15 times the capacity of Chickamauga Dam.

The construction over the next few years of Nickajack Dam to replace the old, leaky Hales Bar Dam will contribute an important construction payroll to the community. This will add a new facility which could have great attraction for recreational development, in addition to its multipurpose uses for flood control, navigation, and electric power generation.

Although I am identifying some of the dams and steam plants as being near to Chattanooga, I do not want to leave the impression that the city's power supply is dependent upon these--or any other--particular plants. The generation and transmission facilities which TVA builds are designed and operated to produce the lowest cost to the power system

as a whole. And Chattanooga is served from the system. Our Paradise Steam Plant is a mine-mouth plant located in the coal fields of southwestern Kentucky. Coal reaches the plant from a short distance away in 100-ton, rubber-tired carryalls. Even though the plant is nearly 200 miles from Chattanooga, the low-cost electric energy it adds to our system contributes to our ability to hold electric rates low in Chattanooga.

You may be interested in hearing about a recent development which will help to hold down system costs. This is the exchange of unusually large blocks of power with neighboring utility systems. Ever since the beginning of operations, TVA has had arrangements for the exchange of power with adjacent systems for the economic advantage of both parties. We recently entered into an agreement which involves a group of 11 utility systems serving a wide area to the southwest of TVA--in Mississippi, Louisiana, Arkansas, Texas, Oklahoma, and Kansas--which calls for the largest scheduled exchange of power ever to be arranged between independent electric systems.

This exchange is unusual not only because of its size, but also because it calls for the exchange of power on a seasonal basis. The TVA power system has its greatest loads in the winter because of electric heat; and we must either have sufficient generating capacity on our system to carry this load or be able to obtain it from other sources. The power systems in the Southwest have their greatest loads

in the summer because of air conditioning. TVA will deliver power to the 11-company group in the summer, when we have a temporary surplus of generating capacity and they have their peak loads; and they will deliver power to TVA in winter, when we have our peak loads and they have surplus generating capacity. The exchanges will reach as much as 1,500,000 kilowatts, which is an enormous block of power to be swapped. It is about double Chattanooga's peak load. This seasonal exchange means that TVA can effect large savings by avoiding the construction of that much generating capacity; and the utilities can make a similar savings. The mutual economies are substantial and the savings to TVA will help hold down electric bills in the Tennessee Valley.

Still another interesting and recent development on the TVA system which will contribute additional economies is the use of extra-high-voltage (EHV) transmission. To meet load growth on our system and to exchange the large blocks of power with our neighbors, we are building two 500,000-volt transmission lines. Up to now, 161,000 volts is as high as TVA has used and 345,000 volts is the highest in regular use in the United States. But a 500,000-volt line will carry some 14 times as much power as a 161,000-volt line and is economical when very large blocks of power are to be moved great distances.

One of our 500,000-volt lines is to be from our Johnsonville Steam Plant in west Tennessee to the Mississippi River at Memphis, where it will connect with the system of the other utilities. The second line

originates at the Widows Creek Steam Plant, about 50 miles from Chattanooga, and will extend through Huntsville, Alabama, and West Point, Mississippi, to central Mississippi where it will connect with the other systems.

At the moment, TVA is building one new steam plant--the Bull Run plant--in the vicinity of Oak Ridge. Only one generating unit is being installed in this plant, but it is an unusually large unit--900,000 kilowatts. This one plant with its single unit will have 8-1/2 times the capacity of Chickamauga Dam. Because loads are growing so rapidly in Chattanooga and elsewhere on the system, TVA has been able to install a relatively high proportion of very large and very efficient generating plants.

An important measure of the efficiency of TVA's large steam plants is the amount of coal they require to produce a unit of electricity. For each kilowatt-hour of electricity generated at the Watts Bar Steam Plant, it was necessary to burn nearly a pound of coal. Last year TVA's steam plants required an average of only eight-tenths of a pound of coal for each kilowatt-hour generated. The national average is about 0.85 lbs./kwh. A difference of only .05 lbs./kwh doesn't sound very large. However, in view of the more than 52 billion kwh generated at TVA's steam plants last year, the saving in fuel expense as compared to the national average was more than $5-1/2 million.

The great technological improvements which are taking place in the electric power field may appear less dramatic than the space projects at Cape Kennedy and at Huntsville, so it is understandable that the public seems unaware of them. However, the extra-high-voltage transmission facilities and the unusually large generating units that TVA and other power systems are installing are but two examples of some very significant technological improvements in the electric industry.

The Watts Bar Steam Plant was built in the early forties, and in it TVA installed units of 60,000 kilowatts--at that time among the largest and most efficient in the Nation. The Johnsonville Steam Plant was built in the early fifties with units of 112,500 kilowatts. In more recent plants, all built within the past 10 years, we installed units of 135,000 kilowatts; then 180,000; then 250,000; then 500,000; then 650,000; and finally 900,000 kilowatts. Such is the measure of technological progress in the development of steam generating units.

The principal benefits which Chattanooga receives from TVA power flow from having a dependable and abundant supply of low-cost electricity.

> Power reaches the city over a number of transmission lines from a variety of points on the system; this helps to assure dependability;
>
> the power is supplied from entities whose primary objective is to assist this region to develop economically--systems which have been provided the means to build the power facilities required for that development; this assures an abundance of power;

> and power comes from a system which is operated primarily as a service to electric consumers and whose management believes through its own personal convictions the statutory mandate that low costs of operation and high use of electric energy are important marks of consumer service; these help to assure low electric rates.

An abundant supply of low-cost power is also important to industry. But no one knows better than TVA that there are many factors other than the cost of power which attract industry to a community. I doubt that a single industry located in Chattanooga primarily because its power costs would be low. But certainly the cost of power has some influence and a dependable supply of electric power at reasonable rates is important to industrial growth. This is something which Chattanooga and other communities in the Valley have in common.

This past year alone, customers served by the Chattanooga Power Board saved nearly $15 million in their electric bills as compared with what they would have paid at the average of rates which prevail throughout the Nation.

The TVA programs which have had the most direct impact on Chattanooga's industrial growth are the navigation channel and the regulation of the river flow so that flood waters are passed downstream safely. Several grain industries have located new plants in Chattanooga to use the river channel. And Combustion Engineering uses it for shipping unusually heavy or large pieces of equipment. An adequate supply of fresh water for industrial processes and municipal consumption is becoming ever

more difficult to find. Chattanooga has such a water supply in abundance.

As consumers of TVA power you make payments in lieu of taxes through your power bills to the states and counties in which TVA's power system operates. The payments are 5 percent of our wholesale revenue and through them TVA has become the largest taxpayer in Tennessee.

Chances are that the taxes you pay in your electric bills are much higher than you thought. Last year, for example, TVA received $11,400,000 in revenue from its wholesale deliveries to the Chattanooga Power Board. With respect to this portion of our total revenue, as consumers of TVA power you will pay through your power bills about $570,000 to Tennessee and Hamilton County.

The Power Board is the largest taxpayer in Chattanooga and in Hamilton County; its payments last year exceeded $1,600,000. Altogether, the customers of the Chattanooga Power Board paid $2,170,000 for state and local taxes, exclusive of the 3 percent sales tax. Thus, you customers of the Power Board paid almost exactly ten cents in taxes out of each dollar of your electric bills. This ten cents is higher than the state and local taxes paid by customers of neighboring privately owned utilities, such as the Georgia Power Company with 6.5 cents, and the Alabama Power Company with 7.2 cents.

There are also a number of secondary benefits to Chattanooga from TVA's

programs. For example, the materials and equipment that TVA purchases have a direct effect on Chattanooga industry and Chattanooga employment.

TVA's purchases from more than 150 Chattanooga concerns average almost $12 million a year, including $7 million a year from Combustion Engineering. TVA has purchased during the past 15 years a total of 26 large steam generating units from Combustion--almost half of all the boilers TVA has bought--for a total of over $102 million.

Six of TVA's nine large steam plants contain Combustion boilers. In four of these plants, including Widows Creek, Combustion supplied seven boilers which, at the time they were purchased, were the largest ever built. Thus, Combustion had a major role along with TVA in pioneering the development of extra-large power generating units.

Besides Combustion and the other firms located in Chattanooga, TVA makes purchases from a large number of companies who maintain representatives here chiefly because of TVA business. Purchases from them average another $12 million a year.

You name it; TVA buys it. And the list of Chattanooga vendors runs the gamut from paper clips to boilers, with chemicals, welding equipment, construction materials, safety equipment, paint, electrical conductor, and other items too numerous to mention filling in the gap. The diversity of TVA purchases fits well with Chattanooga's diversified manufacturing.

TVA keeps up with the development of nuclear power. Through contractual arrangements with the Atomic Energy Commission we have a staff located at Oak Ridge following the design and construction of an experimental nuclear plant which the AEC is building. And TVA will operate the plant when it is completed. In general, nuclear power is not yet competitive with the conventional coal-fired plants in the Tennessee Valley area, and TVA has no immediate plans to build a large nuclear plant.

However, some power systems in areas where conventional fuels are expensive are turning to nuclear plants and recent developments show promise of bringing the first nuclear plant much nearer in this area. Even if TVA were to shift some of its construction from coal-fired plants to nuclear plants, Chattanooga would remain an important supplier to TVA because Combustion Engineering is one of the Nation's foremost fabricators of nuclear equipment.

Other important secondary benefits which Chattanooga derives from the TVA power program flow from our administrative arrangements. Almost from the beginning, Chattanooga has been headquarters for TVA's power organization. At present, Chattanooga is also the headquarters for our Divisions of Purchasing, Health and Safety, and Property and Supply, and for our mapping organization.

In the Chattanooga area--and I include the Widows Creek Steam Plant,

Hales Bar, and Chickamauga Dam--TVA employs about 2,800 with an annual payroll of $22 million. These totals, which include 700 construction workers at Widows Creek, will rise sharply, but temporarily, during the construction of Nickajack Dam.

To fill its employment needs, TVA recruits a variety of skills from all parts of the Nation, and we have some thorough training programs. Any community gains when its population includes large numbers of skilled men and women with diverse talents. The contribution of TVA's staff of engineers, doctors, scientists, accountants, economists, and skilled craftsmen to the civic, spiritual, and cultural life of Chattanooga is significant.

We anticipate that the number of permanent employees located in Chattanooga will increase. As you know, we are requesting funds to build a new office building. I know that some are disappointed that TVA finds it necessary to locate this new building outside the downtown area, but I assure you that the location was determined only after careful study involving many factors, and is far superior for our operations than alternatives available to us.

Earlier I referred to the visitors who come to Chattanooga to study our power activities. Last year we received several hundred study visitors and 162 of them were from 34 different foreign nations in the far corners of the world. Some stayed a few days; others remained for several months. They added something to the city's tourist

revenues for the hotel and other services they required. And through them Chattanooga has become known from Afghanistan to Zanzibar.

The people of TVA are motivated by a common objective to promote the over-all development of the Tennessee Valley region. We look for ways to work with the people in the region in helping them to contribute to the region's progress. Those of us who live in Chattanooga consider this fine city an important industrial and cultural center within the Valley.

We are proud to be a part of Chattanooga and this region and have dedicated our energies to the objectives set out for us by Congress in the TVA Act. We live with the people in the region; we see the needs which are here, and we lend our efforts to filling those needs insofar as conditions will permit. We recognize that TVA will have the support of the people in the region, and will deserve to have it only so long as it continues to serve the best interests of the Tennessee Valley and our Nation.

Goldwater-TVA

TVA-file

In 1961, Senator Goldwater commented on the people's reaction to TVA and other Federal power projects by stating(Sept. 23, 1961-CR): "I do not blame the people for enjoying the low-cost subsidized Federal power they have been getting for years; people from any other section of the country would probably accept the same gifts if forced upon them by the Federal government...." The United States Government has not forced upon his state the billion dollars in Federal funds needed for the Central Arizona project that he proposed before Congress. Rather, he seems perfectly willing, even anxious to accept the type of "gift" that would benefit his state. Other than this project, the senator has supported only one other major river basin development -- the Colorado River Storage Project, a worthwhile project, but again one which confers direct benefits upon his own state. With these two exceptions, he has voted against every water resource project which has come before the Senate for a roll call vote.

This type of provincialism and "me-first" approach not only fails to take into account the total good of the nation but it pits one section of the country against another. This trend in Mr. Goldwater's thinking was evident in 1957 when he remarked," I can assure the people of the TVA area that the people of Arizona are not interested one whit in supplying the hundreds of millions of dollars necessary for the expansion of the TVA area through cheap electricity." Luckily this type of thinking is not nationwide. If it were, there would be no help for drought-stricken areas or flood-damaged areas or other portions of the country which need the help of the whole nation, not just one area.

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Goldwater - TVA

It is ironic, in view of Senator Goldwater's dislike for federally financed river projects, that the nation's first reclamation, the Theodore Roosevelt Dam of the Salt River Project, made possible the creation of Phoenix, Arizona, the economic center of that state. It is also ironic that the same party which helped to start the conservation movement on its way under Teddy Roosevelt now endorses a candidate who would bring the movement to a virtual standstill through disregard for the importance of just such projects as the one which converted Arizona from a desert wasteland into a thriving state.

If the senator from Arizona is so intent on selling the TVA to private enterprise, why has he not mentioned also in this connection the Columbia River Hydroelectric System or the Central Valley Project in California or the Colorado River Storage Project or the Missouri Basin River Control System? Could it be that these are too close to home, geographically, economically, and politically?

Mr. Goldwater has said that if TVA were sold to private business, "We would get more back in taxes out of TVA in a matter of five years than we've gotten out of it since the thing started." In order for his calculations to be correct, the company which purchased TVA would have to pay taxes is excess of $100,000,000 per year. This is the "decentralization" of power that he would recommend.

The family that lives on an irrigated farm, or enjoys low-cost electricity from a Federal powerplant, or is saved from damaging flood by a multipurpose dam, is not alone in benefiting from development of our natural resources.

The acres reclaimed from the desert, or saved from rampaging flood waters, are part of the whole Nation, the low-cost electricity is muscle to build a better economy.

This principle--that development of the resources of one area benefits all of the people of the United States--has guided leaders of both political parties for generations.

President Kennedy liked to say that a rising tide lifts all boats; President Johnson has expressed the same thought in another way--that we can build a great society for all of our people through unity of purpose.

Teddy Roosevelt, Gifford Pinchot, Charles McNary, Franklin Delano Roosevelt, these are just a few of the names which appear on the roll of great conservationists. Irrespective of political party, each generation has had leaders devoted to the wise use of the riches which nature has given us.

But today there are those who seek to divide our nation, those who see the resources of one State as the private property of that state, and of private interests within its borders.

Consider, for example, the pork barrel philosophy of the Senator from Arizona who aspires to national office. He is seeking a billion dollars in Federal money--collected from taxpayers everywhere--to bring badly needed water and power to his state. And at the same time he obstructs and ridicules Federal programs to develop the resources of other states.

He expressed his view on the floor of the Senate a few years ago when he declared: "I can assure the people of the TVA area that the people of Arizona are not interested one whit in supplying the hundreds of millions of dollars necessary for the expansion of the TVA area through cheap electricity.."(Congressional Record, Aug. 9, 1957,p. 12515).

Senator Goldwater has proposed at regular intervals that the Tennessee Valley Authority be sold to private interests. And I'm told that down in the Southeast there is a very popular bumper sticker which reads: "Sell TVA? I'd sooner sell Arizona!"

Well, I'm not advocating that we sell Arizona, nor am I proposing that we dispose of the Tennessee Valley Authority. I'm pointing out, on the contrary, that a divisive, all-for-me approach to resource development not only fails to build the wealth of the nation but also tends to set one region against the other. The result of such a contest can only be national stagnation.

The difference between the Goldwater approach and the Johnson approach to resource development points up the difference in approach on over-all national policy. It is the narrow, selfish view as contrasted to President Johnson's broad, national approach.

In the Senator's fast-buck approach to resources, the national wealth is measured only in terms of money. He measures the nation's riches by counting the gold stored at Fort Knox. The amount of money appropriated by Congress is his yardstick for tallying up the value of resource development. Which like considering investment without the return on that investment.

I assume this is so, for there is no other apparent justification for his consistent votes against resource development everywhere outside of Arizona. And I can think of no other background for his persistent urging that the Federal Government dispose of the TVA.

Can any of us contend that TVA should be dismantled and sold off in pieces because it will take the American taxpayers another 50 years to recover their investment in it?

Can we afford to ignore the fact that in the great regional development which we call the TVA the state of Tennessee and other Valley states have found a way out of the grinding poverty which afflicted them thirty years ago? Can we overlook the rising incomes of the people and the resulting rising income tax payments? Can we ignore the land made habitable by control of floods, the eroded lands reclaimed by tree planting or wise use of fertilizer, the new and expanding industries which have brought jobs, the beautiful lakes which have created new enjoyment as well as a prosperous tourist industry for people of the seven-state area? Above all, can we disregard the gain in human dignity which has accompanied

the taming of a river for the good of man?

If Senator Goldwater wants to sell the TVA, how about the Columbia River hydroelectric system? Or the Central Valley Project in California? Or the Colorado River Storage Project? Or the Missouri Basin river control system? Or the hundreds of reclamation projects which are making water available to farmers throughout the West? How about the flood control and navigation works, and beach erosion control projects and harbor improvements built by the Corps of Engineers in the East as well as the West?

It may well be 50 years, or more, before American taxpayers get back every dollar of their investment in these natural resource developments. But can any American say that the investment should not have been made--or that similar investments should not be made? Again, I think not.

There was a time when the great riches of our land were up for grabs--our forests for random cutting, our rivers for pollution, our soil for fast-back farming. But I think we learned half a century ago that the way of the robber barons was not the way we wanted to go. It was a great Republican President, Teddy Roosevelt, who put a stop to this despoilation and started our conservation movement on its way. And it is ironic that the party of Teddy Roosevelt has draped his mantle around a man who wants to go back to the nineteenth century in resource development.

If we had had Goldwater thinking instead of Roosevelt thinking 60 years ago, very likely we would not have any State of Arizona! I submit that the nation's first reclamation project, the Theodore Roosevelt Dam of the Salt River Project at Phoenix, Ariz., by bringing water to the desert, made possible the creation of a great city, the economic center of a great state, habitable for human beings as well as sagebrush.

Until the country club set had its way in the Cow Palace in San Francisco this year, resource development has been, like foreign policy, a bi-partisan effort, with conservation supported by leaders in both political parties.

I am proud that great Democratic Presidents have carried the burden of leadership in recent years. It was Franklin D. Roosevelt, building upon the ideas of a Republican Senator, George W. Norris of Nebraska, among others, who brought TVA into being. And much of the impetus behind the building of Grand Coulee Dam and the Columbia Basin developments also came from FDR--with such Republican leaders as Senator Charles McNary of Oregon. The other river basin projects which are providing irrigation water, hydroelectric power and man-made lakes for the pleasure of the people, while controlling floods downstream, have come into being with the aid of farsighted men of both parties.

But since 1960 there has been a great upsurge in development of our nation's resources. At the Democratic Convention in 1960 we declared: "A thin layer of earth, a few inches of rain, and a blanket of air makes human life possible on our planet. Sound public policy must assure that these essential resources will be available to provide the good life for our children and future generation."

One of President Kennedy's first acts after taking office was to adopt new conservation policies. In February of 1961 he sent his first message on natural resources to Congress--the first such message by an American President in many years.

President Kennedy said: "From the beginning of civilization, every nation's basic wealth and progress has stemmed in large measure from its natural resources. This Nation has been, and is now, especially fortunate in the blessings we have inherited. Our entire society rests upon--and is dependent upon--our water, our land, our forests, and our minerals. How we use these resources influences our health, security, economy, and well-being."

The first White House Conference on Conservation since the historic 1908 Conference called by Teddy Roosevelt was called by President Kennedy, bringing together the Nation's experts in every conservation activity.

And consider these accomplishments of the Kennedy-Johnson Administration:

* The Wilderness Bill and the Land and Water Conservation Fund bill were enacted--to preserve for future Americans a part of the bounty which nature bestowed upon our land;

* Twenty-one major water resources projects have been authorized or stated in the West;

* A highwater mark has been achieved in the annual level of national investment in water resource projects;

* The saline water conversion effort--potentially the greatest boon to arid regions--was quadrupled and promises a dramatic cost breakthrough during the next Administration;

* After 16 years of argument, a bold plan was developed under President Johnson's personal leadership to interconnect the electric power systems of the Pacific Northwest and the Southwest, providing benefits to consumers in 11 Western States, and putting the U.S. in the forefront in technological development among the nations of the world. The nation's first direct current long-distance transmission lines soon will stretch from the Columbia River to Los Angeles, and a new era of public and private power cooperation will begin.

* Federal hydroelectric generation capacity has been increased by 2.6 million kilowatts, and at the same time non-Federal interests have undertaken 5.2 million kilowatts;

* 3,350 miles of vital transmission lines have been added to Federal systems and about 25,000 miles of new lines have been built by non-Federal power systems;

* The world's largest atomic electric plant, at Hanford, Wash., has been authorized and soon will generate as much power as two Bonneville Dams.

* Federal loans by the Rural Electrification Administration continued to bring low-cost power to our farms, and made it possible to open up the lignite coal fields of the Dakotas, and to use Western Colorado coal for electric generation;

* The Delaware Basin Compact was authorized by Congress, permitting the multi-purpose development of that river, and the Senate ratified the Columbia River Treaty which enables the joint U.S.-Canadian development of the full potential of that great river to begin later this year;

* New studies were made of the Passamaquoddy-St. John project, applying dramatic new technology in the age-old dream of harnessing the tides, and showing clearly that 'Quoddy power can be developed to bring down New England's high electric rates;

* To bring the benefits of these developments to the American consumer, the Federal Power Commission has conducted a National Power Survey to encourage both public and private power agencies to make full use of power pooling--thus making the most efficient use of our energy resources and reducing the cost of electricity to homes and industry;

* To give American families more opportunity for outdoor recreation, three superb new national seashores were created during the Kennedy-Johnson administration--at Cape Cod, Mass., Padre Island, Texas, and Point Reyes, Calif. The Ozark Rivers National Riverway was established in Missouri, and the Administration recommended 12 other major new additions to the Park System for action by future Congresses;

* A Bureau of Outdoor Recreation was created to serve two purposes--to provide jobs for 20,000 young Americans who will work in conservation camps across the Nation, and to tackle the big backlog of improvement work needed at Federal recreation areas to make them more satisfying to the needs of the American people.

This is a great record.

The pledge which we Democrats made in 1960 has been fulfilled, and the determination which President Kennedy expressed in his first Conservation Message to develop our resources wisely has been sustained.

But conservation is a never-ending task. For the future, the Democratic Party and President Johnson have pledged to continue the quickened pace of comprehensive development of river basins in every section of the country, employing multi-purpose projects for flood control, irrigation and reclamation, power generation, navigation, municipal water supply, recreation, fish and wildlife enhancement, to realize the fullest possible benefits.

We have pledged also to provide a balanced outdoor recreation program, to preserve millions of acres of primitive and wilderness areas, to continue support for balanced land and forest development, to continue the attack on polluted air and polluted water, to intensify

our efforts to solve the critical water problems of many sections of the country by de-salting of water, to increase the efficient use of electrical power thrɑgh regional interties and more extensive use of high voltage transmission, to continue to promote the development of new and improved methods of generating electric power, such as atomic energy and the Passamaquoddy tidal power.

We have given our promise to preserve the TVA, which revitalized the Tennessee Valley and has been an inspiration for regional development programs throughout the world.

Now let us take a look at the Senate record of Mr. Goldwater in the field of resource development. It is a negative, a narrow, sectional record, a record of obstructionism. Outside of the billion dollar Central Arizona Project, which he is urging today, he has supported only one major river basin development--the Colorado River Storage Project, a worthwhile project, but again one which confers direct benefits upon his own state.

He has opposed the rural electrification program every step of the way. "REA's don't need further expansion, the agency has done its job," he said in an address last year in Denver. Whenever he has had an opportunity to vote against adequate REA loan funds, he has done so. When he had a chance to vote on my bill to keep the loan-making authority of the hands of the REA administrator, where it belongs, he voted against it.

With the exception of the Colorado project, in which his state had a direct interest, he has voted against every water resource project which has come before the Senate for a roll call vote. He opposed my amendment to the Atomic Energy bill of 1954 to set up a Division of Civilian Power Application in the Atomic Energy Commission, opposed the great Niagara project of the New York State Power Authority, opposed the Hells Canyon Dam on the Snake River, voted against giving TVA the right to finance its own power system through issuance of revenue bonds in the private money market, while at the same time voting against Federal appropriations for TVA transmission lines, voted against an adequate program of public works and against funds to finance such a program, opposed the Area Redevelopment Bill, opposed the badly-needed Burns Creek project in Idaho. He supported the odious Dixon-Yates scheme

to bring private power into the TVA area.

Obviously, the Senator's support for the Central Arizona Project has caused him some embarrassment. When pressed by representatives of the Tennessee Valley States for some clarification of the apparent paradox--his urging a $1 billion power and reclamation project in his own State and his longstanding opposition to public power and reclamation elsewhere--he hemmed and howed.

Indeed, the people of Arizona themselves would be ready, willing and able to build the Central Arizona project, he said at one point. Loud outeries were heard from Phoenix, and the good Senator fudged up this statement to add that they could build it, all right, but they'd prefer to have Uncle Sam put up the $1 billion. And after all, he explained, the project's cost would be repaid over a 50-year period to the Federal Treasury.

You know and I know that all Federal investment in power and water facilities is repaid to the Treasury with interest. And no amount of backing and filling can alter the fact that the Arizona project would be financed in exactly the same way as every other Federal reclamation project. The only difference is that where Arizona is concerned it must have seemed convenient to rise above principle.

I have emphasized the benefits to people from our great resource development program, because I believe this is where the emphasis should be.

This is the way the reclamation program was described by the Commissioner of Reclamation in his report on last year's activities:

"In New Mexico, a little Navajo girl, who had never seen a large body of water, happily frolicked away the hot summer afternoons by a cool lake created in the desert. In Arizona, a young boy, fishing in the Colorado River below the nearly completed Glen Canyon Dam, experienced the great thrill of catching his first trout. In Moline, Ill., a father found employment in a factory making earth-moving machinery. A family in a suburb of Phoenix, Ariz., had ample water for drinking, washing and other household uses in a new home on a plot of ground that was formerly uninhabitable desert. A trucker in California bought several new

vehicles for his fleet to carry produce to market. A general store and a safe were opened near the site of Yellowtail Dam to serve construction workers on the big Reclamation job. Youngsters in Chicago got their vitamin C during the sunless winter months from oranges and other citrus fruits grown in the Pacific Southwest."

What are some of the undertakings of the Kennedy-Johnson Administration that have made these things possible?

In California, we have been on the move at the 25 year-old Central Valley Project, one of the most extensive water conservation systems in the world, and the source of life-givin water for a vast garden which has grown out of the desert. This vast complex of dams, rrservoirs, power plants, canals, and transmission lines extends from the Trinity River watershed and Shasta Dam in Northern California for more than two-thirds the length of the State--nearly 500 miles--to the southern end of the San Juaquin Valley.

In 1963, construction got under way at the Valley's San Luis Unit, a Federal-State project which will store a million acre-feet of water to irrigate reclamation project lands on the west side of the San Joaquin Valley, and another 1,100,000 acre feet of water for use by the State of California. San Luis will be the world's third largest earthfill dam. And the San Luis Canal, a river-size waterway, will carry water for 103 miles to the southern California area to provide its cities with municipal water supply and to irrigate farms.

The Trinity River Division of the CVP is nearing completion, to bring more power to Northern California.

In the Colorado River Basin, Glen Canyon Dam is completed and the reservoir created by this great dam--710 feet high--is accumulating 28,040,000 acree feet of water--the second largest manmade lake in the United States. Curecanti, Flaming Gorge, and other participating projects in the Colorado River storage project are under way or completed--bringing life-giving water and low-cost energy in the form of hydroelectric power to the states of Utah, Wyoming, Colorado, Arizona and New Mexico.

In the Pacific Northwest, work continues on the orderly development of the water resources of the Columbia Basin. Some half a million acres are now available for irrigation in the Columbia Basin Project; new power sources are coming on the line.

The dedication of Yellowtail Dam on the Bighorn River in Montana marked a big step forward for the Missouri River Basin project this year. But perhaps the most significant development in the Missouri was the signing of the Missouri Basin systems pooling agreement, which was the first instance in which the Federal Government worked out areawide arrangements with municipalities and rural electric cooperatives for use of the capacity in the Federal transmission system to deliver power to each other, thus making the most efficient use of the energy resources of the entire region.

Irrigated lands in the 17 Western states receiving water from the great Federal projects represent a net gain in our nation's land inventory. And the American people in the East as well as the West benefit from this increase in our national wealth. Something over $1 billion worth of crops a year are grown on these lands; the cumulative value of all crops produced on Federal reclamation projects since 1906 is approaching $20 billion.

If Senator Goldwater wants to complain because it takes 50 years for our investment in reclamation to be paid back, he should ponder the fact that this harvest of $20 billion on lands reclaimed from the desert is almost <u>five times</u> the entire Federal cost of plant, property, and equipment associated with all Reclamation projects for hydroelectric power generation, flood prevention, navigation, fish and wildlife conservation, recreation, river regulation and other public needs in addition to irrigation.

To measure the reclamation program in terms of human values, more than half a million people live on the 125,000-plus irrigated farms on Reclamation projects. Water from Reclamation projects went to more than 10 million people, urban as well as rural. Water often is called the lifeblood of the West--and thanks to the Federal Reclamation program, stimulated by the Kennedy-Johnson Administration, this lifeblood continues to flow where it is most needed.

More than 10 million people visit Reclamation projects each year just to view the scenery--or, as President Johnson said in his acceptance speech, to touch beauty. Another five million fish in man-made reservoirs, picnics, water skiing, camping, boating and hunting attract other millions of American families.

Conservation is more than protectionism--although there is an element of protection in our national resource policies. It is enhancement and development of the bounty of nature for the good of the American people. And President Johnson and I are dedicated to the proposition that this means all American people. Not just those who live in Arizona, or Tennessee, or in the shadow of Grand Coulee Dam.

We have dedicated ourselves, as the records of the U.S. Senate will show, to development of America's resources to create economic opportunities, to provide safety from floods, to retain for the future a portion of the wilderness, to give American families an opportunity to enjoy the wonders of their land.

And the Democratic party has pledged itself to the cause of conservation once again in this year of 1964. We ask your help and your support. This is not 50 Arizonas that have been given to us to use, it is one Nation.

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R E A E Q U A L S P R O S P E R I T Y

PRESIDENTS SUPPORT RURAL ELECTRIFICATION ADMINISTRATION:

PRESIDENT LYNDON B. JOHNSON

"I pledge continued strong support of the R.E.A." (Raleigh, N.C., Oct. 6, 1964)

PRESIDENT JOHN F. KENNEDY

". . . there is no reason to assume that the task of rural electrification has been completed. It is not. So long as electricity is not available at reasonable rates on our farms and in our small towns, rural areas are at a disadvantage . . .

"The rural cooperatives serve not merely to provide power themselves but as a yardstick of reasonableness and a guarantor of fair treatment for all." (Grand Forks, N.D., Sept. 25, 1963)

PRESIDENT DWIGHT D. EISENHOWER

". . . We regard R.E.A. as an investment in agriculture's future..." (Omaha, Neb., Sept. 18, 1952)

PRESIDENT HARRY S. TRUMAN

". . . the Democrats supported R.E.A. . . . We say flatly that we will encourage farm cooperatives, period." (Mankato, Minn., Oct. 14, 1948)

PRESIDENT FRANKLIN D. ROOSEVELT

"From the point of view of raising the living standards of rural America and providing a more efficient form of farm management, one of the most important projects . . . is the extension of rural electrification...

". . . the Rural Electrification Administration program is . . . self-liquidating . . . it is one of the most promising vehicles for attaining a stronger, a happier, and a more prosperous America." (Washington, D.C., Sept. 22, 1944)

BUT NOT SENATOR GOLDWATER:

"It [R.E.A.] . . . should either be dissolved or revised so that it pays its own way." (Denver, Colo., May 3, 1963)

RURAL ELECTRIFICATION BENEFITS AMERICA

* RURAL AMERICA

REA means --

--power rates among the lowest in the country.

--a better standard of living through electricity instead of kerosene lamps.

--telephones on farms through the rural telephone program.

--80,000 rural schools and churches are served.

--small users and sparsely-settled areas are served.

--loans at low rates of interest.

--additional jobs on Main Street of our small towns and in the operation of the power systems.

* URBAN AMERICA

REA means --

--tens of thousands of new jobs created in city factories producing the equipment needed by REA members.

--a boom to business enterprise producing this equipment -- a billion dollar a year market for electric appliances and equipment.

* ECONOMIC GROWTH

REA means --

--new jobs and industry in both city and rural areas.

--employing directly more than 28,000 persons with an annual payroll of more than $140 million.

--additional state and local revenues.

--investment that creates jobs (e.g., in Arkansas the electric co-op invested $35,000 in a shirt factory employing 1,000).

--encouragement by rural co-op members to expand business within their areas.

--a break for the non-farm power consumer -- cooperatives sell 60% of their power product to non-farm customers.

--a break for the housewife -- partly because of REA the American farmer produces more food of higher quality at lower prices to consumers than any farmer anywhere in all of history.

--a yardstick for determining what electricity should cost, thus benefitting every electric consumer in America.

". . . The REA has provided one of the finest success stories and all in the American tradition."

-- Editorial comment,
Sacramento Bee,
January 23, 1964

LYNDON B. JOHNSON LOOKS TO THE FUTURE:

"The rural electrification program has been -- and continues to be -- the favorite target of a few people in this country. As one who has worked as Congressman, as Senator, and as Vice President for 25 years in support of REA, it gives me a great sense of satisfaction to come before you . . . as a member of an Administration which has said -- and will continue to say -- no all the way to those wrecking crews...

"At the time the REA program was conceived and implemented in the 1930's, our objective was to light the homes of our rural sectors. That objective has in large measure been accomplished. But in strengthening the rural life of America, the REA program has built a foundation of strength on which now the structure of industrial expansion can and must be put into place. In the next 25 years, the rural electric cooperatives of the United States will be lighting the lamp of our nation's progress."

-- Address reprinted in Rural Electrification, February, 1963

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