directors of TVA are Dr. Arthur E. Morgan, chairman, who was president of Antioch college; Dr. Harcourt A. Morgan, former president of the University of Tennessee, and Mr. Lilienthal, former utilities commissioner of Wisconsin." (Left to right: Dr. Harcourt A. Morgan, Dr. Arthur E. Morgan,



"About four miles from Norris dam is the town of Norris—the name of the Nebraska senator seems emblazoned as that of the patron saint in the knoxylle region. In Norris town TVA has built some 300 homes, electrically equipped, and the model hamlet is one of the show places for tourists."

## Hundreds of Millions for a Venture in Paternalism "But," he says, "the TVA project will settle the

question." Business men in valley cities say a third of a billion dollars is quite a price to pay to settle this engineering doubt, especially as later on the expenditures will be coming home to roost in the shape of higher taxes.

Away from the valley, men in Atlanta, Birmingham, New Orleans, Montgomery, Memphis, are saying it seems a lot of money for the government to put out to develop a basin containing 21/4 million

Norris dam, near Knoxville, is to be 253 feet high and 1,800 feet long at the crest. It will impound the waters of the Clinch river and form an artificial lake with a shore line of 800 miles and an area of 80 square miles.

In the bed of the damsite borings have been made and fissures and crevices have been discovered in the dolomite rock. These were being filled with concrete when this writer visited the dam a few weeks ago. Concrete for the dam was not to be poured until the fissures were filled.

Rumors have since floated in the region that geological troubles were being encountered that might make the security of the dam doubtful. Construction engineers at the dam, at the time of our visit, held the rock faults were not unusual for dolomite formation and said full precautions were

## Face Battle with Mud

As to the silt, that is another problem. The Tennessee is as muddy as the Missouri. The soil washes off the hillsides. A battle against erosion and for reforestation is part of the TVA program which is well applauded. But the silt is still in the river water, and, once the water is gathered into reservoirs, much of the mud settles to the bottom. In North Carolina two dams are spoken of by TVA where the silt has almost filled the reservoirs, until the dams now get only the run of the river.

Some 60,000 acres of hillside now are being bought for reforestation and to protect the reserroirs from filling with silt. Much more is to be bought. Land to be inundated by the Norris dam project is being bought at \$10 to \$30 an acre, some best valley land bringing \$100. When Norris dam is finished more than 3,000 families will have to be out of their ancestral homes. Some hamlets will be under water, and many old cemeteries, bodies from which are now being removed to other

to be bought; for Aurora dam, 200,000. For purchase of land alone, Dr. Morgan says, the expenditures will be between 15 and 30 million dollars. About four miles from Norris dam is the town of Norris—the name of the Nebraska senator seems emblazoned as that of a patron saint in the Knoxville region. In Norris town TVA has built some TVA has brought out a low priced line. Cheap ley, will be paid for by the taxpayer in the industrial 300 homes, electrically equipped, and the model hamlet is one of the show places for tourists.

To market the government ownership electric power a great drive by the TVA is to make the plied the consumer. Under its schedule the typical What many folks in the valley are wondering egion "electric conscious." Intensive campaigns are being made to get folks to put in electric refrigerators, ranges, and other appliances, of which

Gives legal counsel on al

operations; prepares

contracts; handles claim

litigation

CONSTRUCTION

& MAINTENANCE

Maintains buildings

grounds, and equipmen

provides fire and quard

protection

MATERIALS

Purchases equipment and

housing, storing, and issu-

ance of supplies

PERSONNEL

Interviews applicants fo

positions; gives examina-

tions; keeps records o

employes; maintain

medical and recreationa

One widespread criticism is that this low-price smaller Dr. Morgan speaks of regions in wh competition has impaired the investment of more the average cash income of a mountain farm than 100,000 investors in bonds and preferred stock only \$45 a year. One survey of Grainger cou of private power companies in the Tennessee valley Tennessee, gave \$207 as the average cash fam with a physical investment of some \$500,000,000. income in 1932, while outgo was figured at \$299 Critics declare that the cheap rates do not figure leaving the family \$92 in the red.

power is offered to any municipality owning its own trial states like Illinois, Michigan, Ohio, Wiscons Pennsylvania. TVA insists that all proper chara TVA sets the rates at which such current is sup- are carried in the price making.

general consumer would pay an average of about how the hillside farmer with \$150 cash incom 2 cents a kilowatt hour. For a fully electrified home, year is going to pay for electric ranges and ref which is the TVA objective, the rate would average erators. One TVA economist has figured that \$120 is the average cash income of the rural farm re For 600 kilowatt hours minimum the TVA price dent in the valley, or \$480.12 for a farm family is \$7.30 a month, as compared with \$18.90 in Chi- when it can collect it. The figures, of course, do cago, \$18.13 in Baltimore, \$11.80 in St. Louis, \$30.55 include the food raised and used by the farm In some counties the cash income runs m

of being carried on the consumers' bills in the val- expected to be attracted to the valley by the lun

A giant tree of many branches is the Tennessee Valley Authority. This chart reveals the omplicated organizations of TVA, and each department's relation to all other departments.

AUTHORITY

DIVISION

d operating

LAND PLANING

Prepares plans fo utiliza-

tion of lands; desgns and

constructs quaters

POWER

itudies improved methods

of electrical generation

transmission, and distribu

INDUSTRY

Makes surveys and studies

for a balanced program of

industry

SOCIAL AND

ECONOMIC

Offers training program

medical service for em

ployes

CHEMICAL

ENGINEERING

Tests materials and proc

esses for production of

fertilizer

GENERAL

ENGINEERING

AND GEOLOGY

Conducts investigations

water resources

FORESTRY AND

SOIL EROSION

Supervises soil erosion con

trol and forestry work

TRANSPORTATION

RATES

Surveys water, rail, high-

way, and air rates in trans-

portation

AGRICULTURAL

Conducts studies, investi-

gations, and farm demon-

strations incident to im-

provement of agriculture

DEVELOP

ORGANIZA

COORDINATIO

Coordinates policies

BOARD OF DI

control of

Formulates polic

TENNESSEE VALLE

vises expe

program; analyzes

munda

urveys, and designs of

ACQUISITION

Prepares property and

appraisal data for pur-

chase of lands

INFORMATION

Collects and distributes

on personnel and activi-

SERVICE

ENGINEERING

Handles land surveys

prepares material speci-

fications: tests raw ma-

FINANCE

Accounts for receipt and

disbursement of all funds:

handles pay rolls and

other financial work

SECRETARY

Keeps records of contracts and

ORGANIZATIONS

GENERAL COUNSEL

Advises on legal matters

terials

in many of the hill towns. At Kingsport, Elizabeth- machine in every cow shed. ton, Greeneville, Clinton, Lenoir City, Athens, Cleve- As to the hardy mountaineers, mostly of Scotchcent of the workers live on farms outside town. mixed emotions. While thankful for government

Ice Cubes for Every Still At Alcoa, where 30 per cent of the virgin alumimentation scheme.

part-time work in the plant.

GENERAL CONSULTANTS

consultants on legal, power, enginee

ing and agricultural matters

industry." Some farmers will be able to add to mountaineer will throw away his kerosene lamp 9,500 men at present are employed on the projects, their income by working part time in factories. and touch a button to turn on the light, while hill- and at the peak it is figured 20,000 will be on the Although heralded as a new discovery by the side cabins will have electric toasters, washers, and job. In addition 20,000 are expected to find work professoriat at Knoxville, this part-time idea has ranges. And the millennium is sure to dawn with in cement mills and other plants furnishing matebeen operated for years by "rugged individualism" ice cubes for every still and an electric milking rial. In addition 5,000 CCC workers are working

CONTROLER

pervises preparation of

budgets and reports

MUSCLE SHOALS

POWER PLANT

tion of the Wilson dam

power plant

OPERATING

ORGANIZATIONS

NORRIS DAM

Construction of Norris

dam and hydro-electric

plant on Clinch river

FERTILIZER PLANT

Construction and opera-

tion of Muscle Shoals fer-

tilizer plant; maintenance

and upkeep of nitrate

plant No. 2

meanwhile, however, still continuing to larrup between 50,000 and 70,000 acres of the fattest land

On the Tennessee river above the Wheeler dam, which is to cost 38 million dollars, and below the site

of the 13-million-dollar Hiwassee dam, is the Hale Bar lock and dam, near Chattanooga, pictured

above. On the far bank of the river is the lock; on the near bank the power house.

Maintenance and opera-

TRANSMISSION

Construction and opera

tion of transmission lines

from Wilson dam to Nor-

ris dam and to cities

WHEELER DAM

Construction of Wheeler

dam on Tennessee river

land, and in other communities more than 50 per Irish colonial stock, they seem to view it all with easy money sifting into the valley, many of them seem to demur at being pushed around in any regi-

num produced in the United States is smelted, 45 At Hendersonville, N. C., farmers of old colonial per cent of the 2,863 workers live on farms and do stock are showing belligerence against the TVA scheme to drown their ancestral acres to make a This tendency has been moving along under pri-reservoir in the French Broad river to feed the dynavate enterprise, and TVA, lifting the idea, is out mos some 400 miles down river at Muscle Shoals. o put it across in a big way in the water-shed, The proposed 3U-n

farms, many of them descendants of frontiersmen of

the days of the Watauga settlements.

The French Broad Valley association has been formed to fight the scheme, and it has blood in its eyes. But TVA is equipped with eminent domain and the association seems in despair, although a temporary delay has been announced.

Criticisms in the south that TVA is using cutthroat competitive methods in putting the government into business were recently sharpened by events in Knoxville. They revolved around efforts under TVA auspices to establish a municipal own-

Here the yardstick was said to resemble a sandbag. Knoxville in November voted for a municipal plant. The city is now served by the Tennessee Public Service company, which operates in 25 communities in east Tennessee. It also runs the street cars in Knoxville, but these are running a deficit of

The city offered to buy the distributing facilities the cream of the company's business, for \$2,500,000 in bonds—excluding the street cars. But the bonds could not be sold and the company would not accept them. When appeal was made to the Public Works Administration it was explained that PWA money could not be used to buy existing plants, but only for new construction, to stimulate employment. So instead PWA allotted \$2,600,000 to Knoxville to build a municipal plant, of which \$600,000 was a direct gift.

## Take It or Leave It!

The TVA directors, who say they are against duplication of systems, after negotiations offered the Tennessee Public Service company \$6,550,000—take it or leave it—for its transmission and distribution facilities in Knoxville and other cities—but excluding the street car line.

The company officials answered that the amount would not suffice to pay off the bonds of the company, which amounted to \$7,780,000 holding that the proposition was confiscatory. Knoxville went ahead with its plans to build a competing municipal plant with PWA easy money, and the public service company seemed caught in a nutcracker operated by federal funds. Its officials, realizing their position, finally consented to sell out at Lilienthal's price. Most recent development, that of Oct. 19, has the question of sale of the utilities properties in the hands of the Tennessee state railroad and public utilities commission, which is considering whether TVA may make the purchase—at a price finally fixed at \$6,191,000.

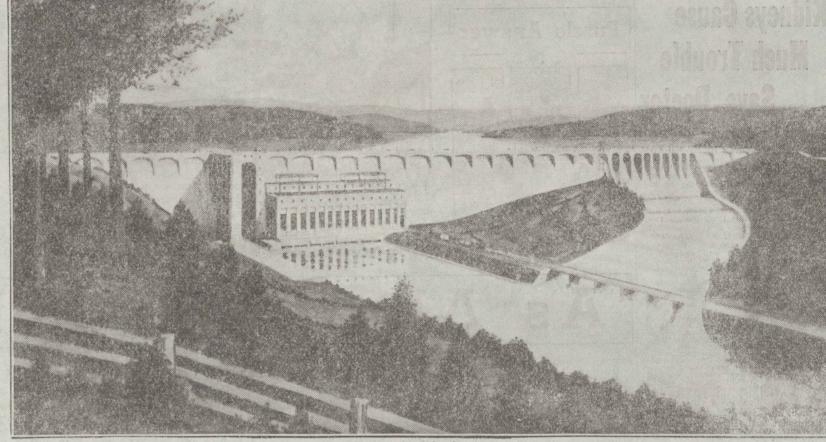
The three directors of TVA are Dr. Arthur E. Morgan, chairman, who was president of Antioch college; Dr. Harcourt A. Morgan; former president of the University of Tennessee, and Mr. Lilienthal, former utilities commissioner of Wisconsin. There of cheap power. This in turn, as TVA views it, will "rugged individualism" from Helena to breakfast. are 2,177 salaried employes, with a pay roll for permake possible a "balancing of agriculture and" Enthusiasts speak of the golden day when every sonal services for the fiscal year of \$6.800,000. Some on reforestation and soil erosion.



"Some 9.500 men at present are employed on the projects, and at the peak it is figured 20.000 will be on the job. In addition 20,000 are expected to find work in cement mills and other plants furnishing material." (Pay day at Norris.)



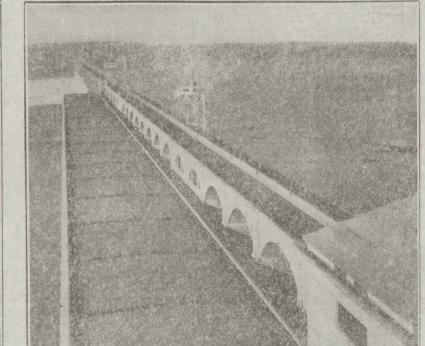
When Norris dam is finished more than 3,000 families will have to be out of their ancestral homes. Some hamlets will be under water, and many old cemeteries, bodies from which are now being removed to other grounds." (Village of Loyston, Tenn., which will be under 100 feet of water when



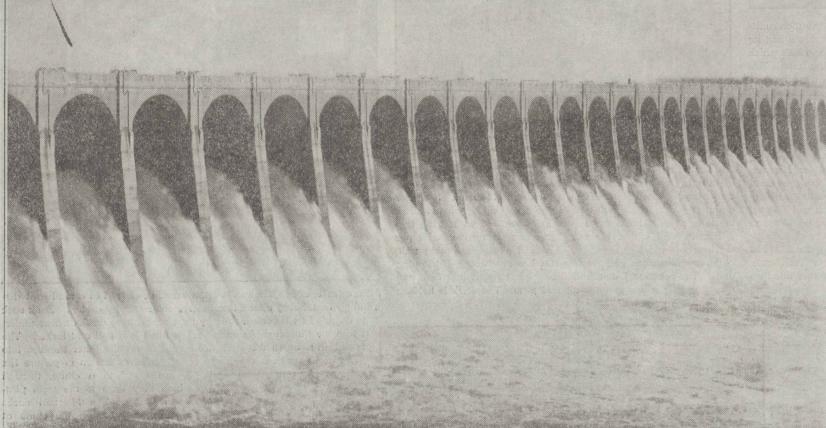
"Norris dam, near Knoxville, is to be 253 feet high and 1,800 feet long at the crest. It will impound the waters of the Clinch river and form an artificial lake with a shore line of 800 miles and an area of 80 square miles." (Engineer's drawing of Norris dam as it is expected to appear after completion.)



"Land to be inundated by the Norris dam project is being bought . (Valley of Clinch river, near Maynardsville, which will be submerged.)



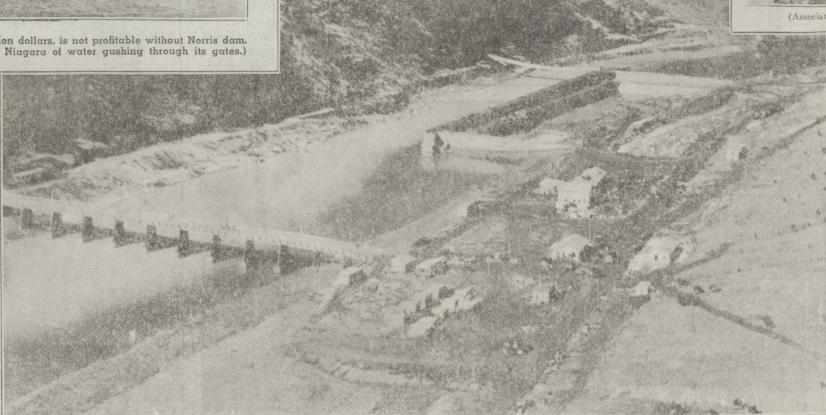
Wilson dam and Wilson lake at Muscle Shoals. Other dams are being constructed to make Wilson dam profitable, is the TVA claim. (Acme photo.)

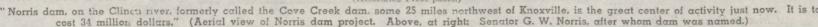


Wilson dam at Muscle Shoals, Alabama, which with its hydroelectric equipment cost the government 47 million dollars, is not profitable without Norris dam. So TVA says." (A close-up of the spillway of the great Muscle Shoals project as it appears today, with a Niagara of water gushing through its gates.)



. to feed the dynamos some 400 miles down the river at Muscle Shoals." (Interior of the dynamo room at the Wilson dam development at Muscle Shoals.) (Underwood & Underwood photo.)





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