



Above: Aerial View of the Huge Norris Dam Project. Below: State Line Station, at the Illinois-Indiana Line, Most Modern of Steam Generating Plants.



David E. Lilienthal.

"More Power to You," Is Aim of Administration

Government Becomes Frank Competitor of Private Enterprise in Generating, Distributing and Selling Electric Energy.

By WILLIAM C. UTLEY
ELECTRICITY is in the air over the valley of the Tennessee river. Energy—pick-swinging, ditch-digging, back-sweating energy—bristles out of slopes where semi-primitive mountaineers have lagged behind the times. "More Power to You" is the slogan that seems almost to furnish a rhythm for the laboring actions of the ten thousand workers who have but lately come there, and whose rank is soon to be increased by another ten thousand. For power is the watchword of the New Deal, as it is applied to the Tennessee valley authority.

The TVA, as it is alphabetically shortened for the accommodation of breath and tongue, was created to supply jobs, to improve navigation, to control floods, to reclaim thousands of acres of undeveloped natural resources, and, what has come to be regarded as most important of all, to create, distribute and sell electric power at the lowest possible cost. It has been authorized to use federal funds; it will complete an expenditure of more than a billion dollars on Tennessee river projects.

To be sure, it is by no means all of what appears to be the largest scale attempt ever made by the federal government to get into the electric power industry. Along the Colorado river \$365,000,000 is going into dams and reservoirs and power plants; the Columbia river's strength is being harnessed to the tune of \$711,000,000; \$257,000,000 is being spent on projects along the St. Lawrence (although about two-thirds of that amount is for navigation improvements), and more projects are under way at other points throughout the land.

Tennessee Development.

But at the moment it is the Tennessee development that is holding the attention of every person and industry whose annual budget must make allowances for the payment of bills for electrical energy. For the administration has openly declared that it intends to offer the TVA projects as a "yardstick" for the measurement of electric rates charged by municipal plants and privately-owned electric light and power companies everywhere. With that in mind, the TVA is blossoming forth as a frank, out-and-out competitor of private enterprise in generating, distributing and selling electric energy to municipalities, homes, farms and industries.

If it reaches its ultimate goal it will bid fair to effect other major changes in the industry than lowering of rates. It will mark the first serious challenge for supremacy of falling water over steam at high pressure as a force for turning generator turbines.

Private utilities have for years fa-

vored the steam generating plant over the hydro plant.

Reasons for the favor of the steam turbine are sound enough. The best sources of hydro-electric power are, in most cases, far removed from the big load centers—that is, the areas where consumption is most highly concentrated.

Plan for 200 Dams.

Another difficulty with hydro plants is that, in order to supply a demand that is fairly consistent, the flow of rivers upon which the plants are situated must be constant.

To insure perfectly controlled flow of the river at any point on the system, the plans of the TVA include no less than 200 dams, all operated from a central control house. Thus over a vast area, man will be able to control nature by the push of a button.

More difficult for the TVA to overcome will be the lack of a market in the territory where it is to generate. There are only 2,000,000 inhabitants of the Tennessee valley, although the TVA, when completed, will be generating 25,000,000,000 kilowatt-hours a year, almost a third of the total amount required to supply the needs of the entire United States in 1932, when 79,000,000,000 kilowatt-hours were generated.

By supplying power that is much cheaper than that which the valleys are using now, encouraging them to use more and more electricity, heating and air-conditioning their homes with it, and making it do in home, farm and industry every conceivable labor to which electric power may be applied, the TVA hopes to increase the load to a large degree. The directors have opened a subsidiary organization, the EHFA (Electric Home and Farm Authority), whose chief functions have been to finance customers in their purchase of appliances of all kinds.

To Build Up Industry.

Through the national exploitation of the low power rates and the re-making of the area into a country of model homes and homeland, the TVA will endeavor to promote wholesale exodus of industries and home-owners into the Tennessee valley, building up a much greater prospective load than now exists there. All of these moves have already begun to spur the private companies in the Tennessee valley to similar efforts. They have reduced rates 20 to 25 per cent and have succeeded in increasing usage among their customers.

It is easy enough to determine what has to be done to make the TVA a success, but the actual accomplishments are a gargantuan task. Right now the private plants in the area have capacity 33 1/2 per cent in excess of the maximum load. All of the load centers the TVA plans to serve are al-

ready served by two independent sources.

Low rates, of course, are the big talking point. The TVA, which, according to the United States district engineer, can generate electricity at a cost of 4.33 mills a kilowatt-hour and transmit it 250 miles for 1.274 mills a kilowatt-hour (based on a 50 per cent load factor; should the factor drop to 30 per cent, the transmission cost would double), estimates that it can sell power wholesale to municipalities at seven mills a kilowatt-hour. These in turn can retail it at three cents for the first block of the rate, two cents for the second, then one cent and then four mills. For normal residential use this would be about 2 1/2 cents per kilowatt-hour. For a fully-electrified home, using 2,500 kilowatt-hours a year, it would be only about seven mills. Some of the municipal plants in the area have balked at contracting to supply service at such rates, claiming that they cannot break even.

New Light Bills Pleas.

Much publicity has been given the bills for the first month of service after the city of Tupelo, Miss., began buying electricity wholesale from the TVA on March 1, 1934. Among the examples cited were that of Reed Bros., who paid \$210.25 for 6,580 kilowatt-hours in January, and, under the new rate were able to buy 10,210 kilowatt-hours in March for \$145.38; the McLoran Ice Cream company, who used nearly 27 per cent more electricity in March than in January, yet paid a bill approximately \$36 less in March; and the Tupelo Cotton Mill, which paid \$1,846.40 in March for 26 per cent more current than it paid \$3,181.33 for in January.

Residential customers were pleased with similar slashes in their bills.

According to Dr. Arthur E. Morgan, engineer, college president and educator, who is the chairman of the board of three directors appointed to manage the TVA projects, the rates are "considered sufficiently low to constitute an economically feasible and desirable project whenever the demand is such that the market is present which will absorb such large quantities over the hours of the day."

Before cheap power can mean anything, and before it can attract any consumers to the area in large numbers, erosion of the soil by flood must be checked and farms must be fertilized.

Preparing the fertilizer plants at Muscle Shoals and elsewhere, to supply the farmer with fertilizer that he can afford, to rejuvenate his soil to a point where it will begin to produce, are forces under the direction of Dr. Harcourt A. Morgan (no relation to the other Dr. Morgan), who is a co-ordinator of agriculture and industry on the TVA directorate. The third member is the youthful David E. Lilienthal, who is power director of the project.

What they are going to do about the harm that may come to other sections of the country if large industries and home-folks are persuaded to move in masses into the TVA territory, the directors haven't explained.

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IMPROVED UNIFORM INTERNATIONAL SUNDAY SCHOOL Lesson

(By REV. P. B. FITZWATER, D. D., Member of Faculty, Moody Bible Institute of Chicago.)
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Lesson for December 16

THE CHRISTIAN AND THE LORD'S SUPPER

LESSON TEXT—I Corinthians 11: 23-24.

GOLDEN TEXT—For as often as ye eat this bread, and drink this cup, ye do shew the Lord's death till he come.—I Corinthians 11:26.

PRIMARY TOPIC—The Supper Jesus Gave His Friends.

JUNIOR TOPIC—How the Lord's Supper Began.

INTERMEDIATE AND SENIOR TOPIC—Why Observe the Lord's Supper?

YOUNG PEOPLE AND ADULT TOPIC—Realizing Christ's Presence in the Supper.

By the Lord's Supper here is meant the bread and the wine used as emblems of the broken body and shed blood of the Lord Jesus Christ. Some Christians think of the Lord's Supper as a meal of fellowship eaten before the institution of the bread and the cup. To them it means the agape or love-feast which was practiced in the early church. Such would prefer to call this the Communion instead of the Lord's Supper. With this understanding, we can enter into the real understanding and blessing of the ordinance.

I. The Institution of (v. 23).
1. The time. It was on the night of the betrayal of the Lord Jesus, after the betrayer had been announced.

2. Circumstances of (Matt. 26:26). It was in connection with the eating of the Passover. At the command of Jesus the disciples made ready the Passover, and while they were eating Jesus took bread, blessed it, and gave it to them.

3. The elements used. Bread—doubtless common bread of the Passover feast. The Cup—the fruit of the vine.

II. The Significance of (vv. 24-26. Cf. Matt. 26:26-28).

Jesus took natural and literal elements and made them to be symbols of his own body and blood.

1. It is a memorial of the Lord (Lk. 22:19). When Jesus Christ left the world, he left the bread and the cup for the disciples, by which to remember him.

2. To show the Lord's sacrificial death (v. 26). He did not die as a hero, or as an example of unselfish devotion, but as a substitutionary ransom on the cross; he made satisfaction for our sins.

3. It is a guaranty that our sins are forgiven (Rom. 4:25). "It was the signet of the Son of God attached to redemption."

4. It symbolizes the believer's reception of Christ (1 Cor. 10:16). He thereby participates in the body and blood of Christ, becoming a member of his body.

5. It has a forward look to a completed redemption (v. 26). When faith in Christ is exercised, redemption begins, and its completion will take place at the coming of Christ (1 Thess. 4:16, 17). The bread and the cup constitute the keystone of the Lord until he returns.

III. Qualifications for Participation in the Lord's Supper (vv. 27-29).

1. A proper apprehension of its meaning (v. 27). Eating and drinking unworthily primarily refers not to the demerit of the communicant, but to his failure to grasp the meaning and importance of the ordinance. Only regenerated persons can discern the Lord's body. Faith in the integrity of Christ's person and work is essential. Anyone who does not believe in the absolute deity of Christ and his vicarious atonement is an unworthy communicant.

2. Church membership (1 Cor. 11:18-22). The Lord's body is the church, which is composed of regenerated men and women united to Jesus Christ as head, and to each other as members of that body, by the Holy Spirit.

3. An orderly walk. Conduct which disqualifies for participation in the Lord's supper:

a. Immorality (1 Cor. 5:1-13). It is most perilous for one who is guilty of immorality to approach the Lord's table (v. 30). Sickness and death are often visited upon such.

b. Heresy (Titus 3:10; 1 John 4:2, 3). This means that one who holds false doctrine is disqualified for participation in the communion.

c. A Schismatic (Rom. 16:17). The one who stirs up party strife, who causes divisions in the church, should be excluded from the Lord's table.

IV. Penalty for Failure to Discern the Lord's Body (vv. 30-34).

Approaching the Lord's table unworthily issues in the visitation of sickness and death upon the individual. This seems to be plainly the meaning of "weak and sickly among you, and many sleep." This explains the illness of many Christians. The way to escape the judgment is to judge ourselves.

GROUP INSURANCE

The families of almost 5,000,000 workers in the United States are protected by \$8,912,000,000 of group life insurance against the death of their wage-earning members, according to an announcement of the National Industrial Conference board.

This insurance is in effect through almost 30,000 group life-insurance contracts under which employers and employees co-operate to protect employees' families when the wage-earner dies.—Literary Digest.

Briefly Told

Affection can withstand very severe storms of vigor, but not a long frost of indifference.—Sir Walter Scott.

Mercolized Wax

Keeps Skin Young

Absorb blemishes and discolorations using Mercolized Wax daily as directed. Invisible particles of aged skin are freed and all defects such as blackheads, tan, freckles and large pores disappear. Skin is then beautifully clear, velvety and so soft—face looks years younger. Mercolized Wax brings out your hidden beauty. At all leading druggists.

Powdered Saxolite

Reduces wrinkles and other age-signs. Simply dissolve one ounce Saxolite in half-pint witch hazel and use daily as face lotion.

Otherwise!

Gossip will stick to the truth if it is exciting enough.

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Regardless of the curing method used—be safe—follow with an application of Figaro for smoke flavor and protection.

Buy from your merchant. If he doesn't have Figaro, send \$1.10 for 32 oz., enough for 100 lbs. of meat.

FREE Booklet
It gives simple instructions that will enable you to cure the finest meat you ever smoked, and save you a pound. Write for a copy.

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A Sturdy and Stylish Wrist Watch

Complete only \$1.50 post-paid. Cash with order saves 10¢. Choice of metal center expansion dial. Link of genuine leather strap. Accurate dependable timekeeper. Your money back if not perfectly satisfied after seven day trial.

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But It Falls

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Use Mentholatum to help open the nostrils and permit freer breathing.

MENTHOLATUM

Gives COMFORT Daily

NIP THAT COLD

CLEANSE INTERNALLY

Doctors advise: "The moment a cold sets in, eat sparingly CLEANSE INTERNALLY." A cup of Garfield Tea will relieve constipation, help break the cold's hold. Incidentally cleans out the system, increases your resistance—At drug stores—25c & 10c.

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Removes Dandruff—Stops Hair Falling—Imparts Color and Beauty to Gray and Faded Hair—Sells for 25c at Druggists, Grocers, Chemists, etc.

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Ideal for use in connection with Parker's Hair Balm. Makes the hair soft and fluffy. 50 cents by mail or at druggists, Hiseox Chemical Works, Patchogue, N. Y.