RURAL ELECTRIFICATION MAGAZINE

NON-PARTISAN, NON-PROFIT ONE CENT ELECTRICITY FOR EVERY FARM

RURAL YOUTH LEADERSHIP

National's Motion Picture Interests 4-H Scholars

FOURTEENTH YEAR, NO. 7

April, 1956

WASHINGTON 6, D. C.

TO HELP YOU BUILD LOAD DURING APRIL AND MAY
A HARD-HITTING KELVINATOR POWER-USE PROMOTION *

featuring the New 1956

KELVINATOR *Electric* RANGES

with DISPOSABLE ALUMINUM OVEN LININGS and Amazing New "ROAST-READY"

OTHER GREAT NEW, EXCLUSIVE KELVINATOR FEATURES!

• Bonus broiler for double oven convenience • Thermostatic action surface unit controls • Automatic oven timer • Thermostatically-controlled deep fat fryer • Twin rocket surface units • Non-fogging window in oven door

NOW! AN END TO THE DRUDGERY OF OVEN CLEANING!

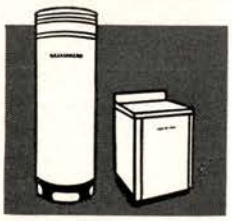
Disposable aluminum oven linings —when soiled, just throw them away. Put in new linings—on top, bottom, and both sides—in a jiffy!

AT LAST! AN *AUTOMATIC* MEAT THERMOMETER THAT TURNS OFF THE OVEN, FLASHES LIGHT WHEN ROAST IS DONE!

Just insert "Roast-Ready", set to *Rare*, *Medium*, or *Well-Done*, and plug into outlet. When it's ready, a light on the backguard says "Roast-Ready"!

Kelvinator 30-inch Space-Saver Range! Giant oven—a whole roast wider than most—yet range takes only 30-inches wall space.

Kelvinator *Quick Recovery* Electric Water Heaters! Round and Table Models in a wide range of sizes and prices! Clean. Cool. Economical.



Shown on *DISNEYLAND*
See them at your local Kelvinator Dealer's
KELVINATOR-LAND
Spring Sales Circus of Super Values in Thrilling Kitchen Appliances.

*** NEW! NOW AVAILABLE FROM KELVINATOR!**
Power-use Promotion Plans specifically developed to most effectively support your own power-use promotional schedule. Write Kelvinator Division, American Motors Corporation, Detroit 32, Michigan for complete information.

Kelvinator

American Motors Means AM AMERICAN MOTORS CORPORATION *More for Americans*

OFFICIAL MONTHLY PUBLICATION

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

1303 New Hampshire Ave., N. W.
Washington 6, D. C.
Phone: ADams 4-8400

RURAL ELECTRIFICATION MAGAZINE

FOURTEENTH YEAR APRIL, 1956 NUMBER 7

Entered as second-class matter July 26, 1946, at the post office at Washington, D. C., under the Act of March 3, 1879, with additional entry at Baltimore, Md. Copyright 1956 by National Rural Electric Cooperative Assn., Washington, D. C.

RURAL ELECTRIFICATION MAGAZINE is published monthly by the National Rural Electric Cooperative Association with a total distribution (average last six months 1955) 14,972, 12,500 paid circulation. Includes all managers, officers and directors of all rural electric cooperatives, public power and public utility districts in the United States and Alaska. Subscriptions, $2 per year; single copy, 20 cents.

SPECIAL ARTICLES

LEGISLATION AND LAW

TIDES, TRENDS AND TECHNICAL

ASSOCIATION ACTIVITIES

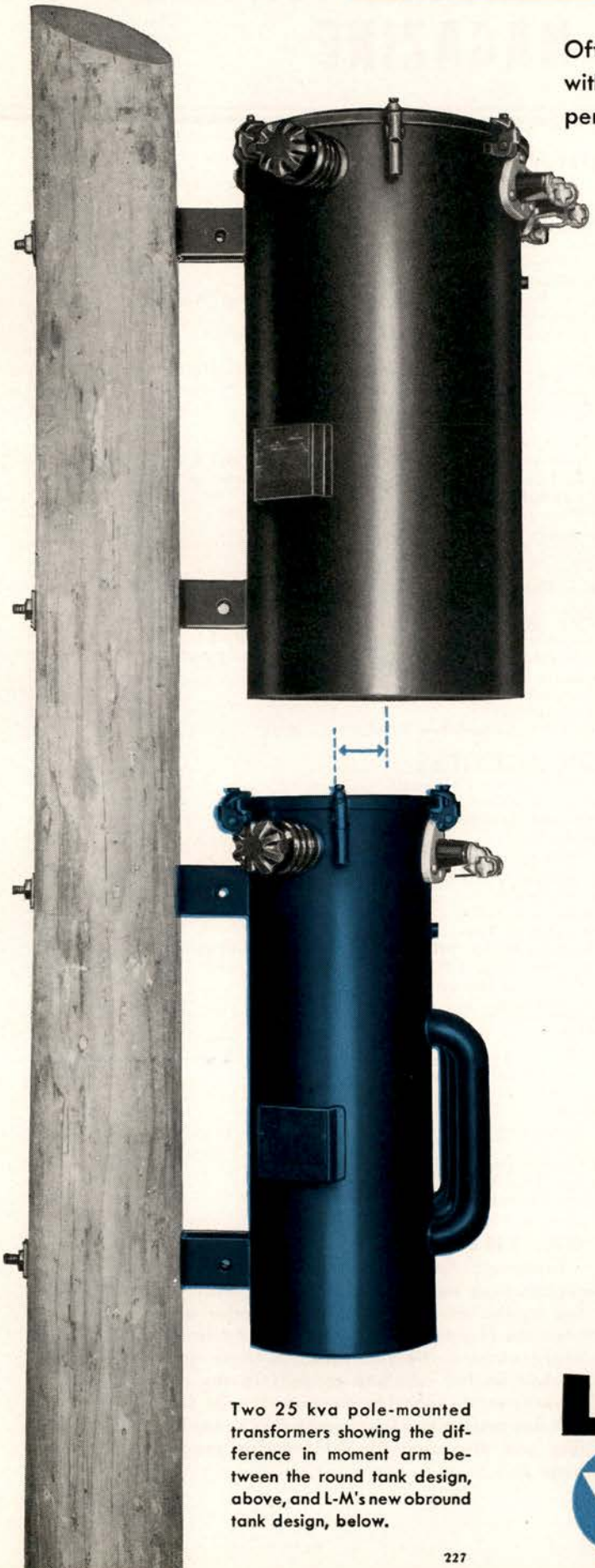
STATE AND LOCAL

DEPARTMENTS

ON THE COVER

Explaining the purpose and problems of rural electric cooperatives was made considerably easier and more effective by the use of NRECA's new motion picture last month when the National Association was host to six 4-H fellowship award winners. The youth leaders chose to include NRECA in their limited schedule of visits to key organizations and governmental agencies concerned with farm people. The half-day session was spent reviewing co-op history and activities and discussing the 4-H electric program. (See story, page 23.)

How L-M's New Obround Design Provides 27% Less Bending Moment



Two 25 kva pole-mounted transformers showing the difference in moment arm between the round tank design, above, and L-M's new obround tank design, below.

Offers 33⅓% increase in transformer capacity on a pole, with no sacrifice of L-M's outstanding Round-Wound® performance characteristics.

L-M's new obround tank design is smaller, lighter, and has a shorter moment arm on the pole. The total bending moment is substantially reduced. Thus the potential capacity of all your transformer structures is greatly increased. L-M's new obround tank design retains all the outstanding Round-Wound performance characteristics.

Less Weight, Shorter Moment Arm

The new obround design has a smaller tank with less transformer oil, resulting in a lighter, easier-to-handle transformer. Cooling tubes are installed where required to provide adequate cooling surface. Transfer of heat from copper to outside air is faster and more efficient because of reduced mass.

The new obround design also reduces the moment arm distance from the pole. The combination of less weight and shorter moment arm distance greatly reduces the total bending moment on the pole.

COMPARE 50 kva *round* tank design and L-M's new 50 kva *obround* tank design:

50 kva ROUND tank design:
Moment arm from center of pole.....1.6 ft.
Weight.....860 lbs.
Bending moment 860 x 1.6.....**1,376 ft.-lbs.**

50 kva L-M OBROUND tank design:
Moment arm from center of pole.....1.33 ft.
Weight.....760 lbs.
Bending moment 760 x 1.33.....**1,010 ft.-lbs.**

L-M's new 50 kva *obround* transformer puts *27%* less bending moment on the pole than the 50 kva *round* tank design. That means that you put less strain on your structures—or you can now hang three 50 kva's where you formerly hung three 37½'s—a 33⅓% increase in capacity.

Round-Wound Performance

The advantages of less weight and shorter moment arm were accomplished without changing L-M's outstanding Round-Wound performance characteristics. These characteristics include low exciting current, high impulse strength, high short-circuit strength, and high short-time overload capacity.

Get Details on L-M's Obround Transformer

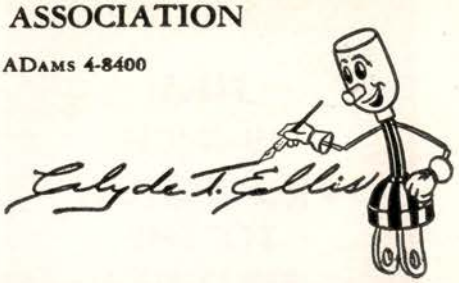
Ask the L-M Field Engineer for application information, weights and dimensions on L-M obround transformers and the exclusive Round-Wound design. Or write A. B. Coyle, Product Manager, Line Material Company, Transformer Division, Zanesville, Ohio (a McGraw Electric Company Division).

LINE MATERIAL

LM® Transformers

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

1303 New Hampshire Ave., N. W., Washington 6, D. C. Phone: ADams 4-8400



By Clyde T. Ellis

Show That Film

There is no time to lose, in my opinion, in showing NRECA's new film "By the People, For the People—The Rural Electric Story" to all who will look at it. It was designed, in part, to show to the employees and members of rural electric systems. And that is important. It can be shown to them in small group meetings or in system annual meetings.

But it was also designed, in part, to show to the folks in town. Every school group, every civic group, women's club and all others who will agree to see it should have the opportunity. But they won't know about it unless we tell them and urge them to let us show it to them. Read the letter from our old friend John Asher on Page 6 for some ideas of the response you can expect.

The film is factual; it is not propaganda. It is just good solid stuff that people—even those who are not familiar with the rural electrification program—will be thrilled and pleased to see.

It is becoming increasingly obvious that the rural electrification program—particularly its wholesale power supply—is in trouble in both the executive and legislative branches of our government. The Hoover Commission recommendations for killing off REA and the Federal power programs and the little things that are being done to put those recommendations into effect short of legislation; the Budget order A-47; the treatment being meted out to the rural electric systems by the Department of Interior; the collapse of the co-ops' generation and transmission program without cutting in the power companies; the failure of the Congress to act upon vital legislation, including the Hells Canyon and Niagara authorization bills and including the TVA refinancing bill, are all ample evidence that we had better make the most of every little opportunity we have to get our story across—and quick.

Anti-Trust Violation?

Are the power companies violating the Sherman Anti-Trust Act in their pirating practices against the rural electric systems? In their Federal Court lawsuit against Willie Wiredhand the power companies are openly and frankly contending that they are out to take the better "customers" of the rural electric systems. I don't cite the following as final authority, but in general terms the following paragraph from a book titled *Managerial Economics*, written by the famed economist, Dr. Joel Dean, is interesting. The lawsuit itself is a violation of almost every part of the principle which the author cites. This is his idea of what is covered by the Sherman Anti-Trust Act:

> "To interfere with the sales of a competitor by defaming him, by disparaging his product, harassing his salesmen, obstructing his deliveries, damaging his goods, intimidating his customers, bribing their purchasing agents, or inducing them to break their contracts with him, by organizing boycotts against him, or by entering into restrictive contracts with distributors which are designed to exclude him from the market; or otherwise to handicap a competitor by spying on him, stealing his trade secrets, involving him in false litigation or inducing his employees to go out on strike, by persuading the producers of materials to discriminate against him, or by entering into exclusive contracts with them in order to deprive him of a source of supply. These and similar practices have been denounced by the legislatures and the courts and forsworn by business itself. In general they fall within the category of acts designed to give a competitor an advantage unrelated to his productive efficiency."

Is there no way to stop this monopoly invasion? Are the rural electric systems the only segment of the economy that is not protected against pirating and harassing by monopolists?

Congratulations, Southwestern Leaders

The Department of the Interior has run into another buzz saw. In carrying out Assistant Secretary Aandahl's 1953 Fargo speech prediction that within five years Federal power prices would more nearly approximate those of the power companies in the respective areas, and that this would relieve "unfortunate pressures" created by the lower Federal rates, Interior has again bestirred the ire of many Congressmen.

One phase of this new Interior policy to jack up the Federal rates, long advocated by the power companies, is the McKay-Aandahl effort to charge more of the cost of the multi-purpose dam construction to power, and their simultaneous effort to raise the rates to the electric cooperatives and other so-called preference customers.

One of the ugliest angles to this maneuver is Interior's effort to saddle all of the burden of the increased rates on to the rural electric cooperatives. The power companies which directly and indirectly are buying substantial blocks of SPA power would get no rate increase. The co-ops would get a 40% rate increase.

In the aggregate, this would mean a wholesale power cost increase of approximately $1.7-million a year in direct cash outlay by 76 co-ops in the six-state SPA area. Indirect losses to the co-ops would perhaps be equally as great, for equally as many in the area are purchasing from the power companies at rates competitive with the Federal rates, and when the Federal rates go up, power company rates go up, too. In fact, the power companies are so cocksure that the Federal rates are going up that they are already in the process of raising their rates to the co-ops in some of the SPA states.

But the Committee on Power for the Southwest, composed principally of the rural electric systems, with the help of some municipally-owned systems, rose up in arms against the McKay-Aandahl fiat. The co-op leaders took their story to their Congressmen. As a result, joint hearings have been going on for the past month by four Congressional committees. Chairman Bob Kerr of Oklahoma has done a brilliant job of exposing Interior's raid on the farmers' rural electric systems.

As a result of the hearings, bills have been introduced in both Houses of the Congress to prohibit Interior from placing its destructive plans into effect for an 18-month period to give Congress time to take a more penetrating look at what is behind the move.

Expert witnesses have testified that neither the power cost allocation nor the rate increase is necessary. (See story, page 13.)

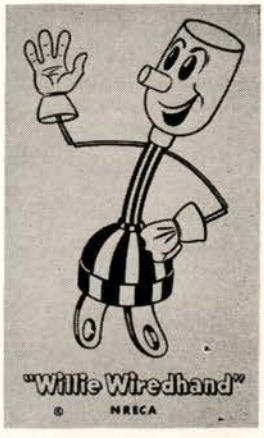
NRECA Member Services Offer . . .

"Willie" Decals

"Willie Wiredhand" decals can be used on trucks and operating equipment, and to brighten up your co-op office.

Color: Black on white

Price: 5" high—$.15 each
10" high— .35 each
15" high— .50 each



Order From:
Field Services, NRECA
1303 New Hampshire Ave., N.W.
Washington 6, D. C.

Hot Water Film Gets Big Hand!

Receives high praise from Agricultural Engineers!

These "stills" from the film give you an idea of the story in "Hot Water Saves Labor"—which fits standard 35 mm. slide-film projection equipment.

Sound is on a long-playing, 16-inch, 33⅓ rpm record. You need not read a script or plan a talk. It's all there. The film and record do the whole job!

Prints of the sound-slide film—HOT WATER SAVES LABOR—have been sent to all State Extension Agricultural Engineers—as well as to REA cooperatives in 37 states.

Letters already received from 35 states indicate widespread acceptance of this film. These letters show its value for viewing by people interested in improving their farming methods and their way of life. A typical comment from one letter, sent by Mr. Charles R. Aiken, Educational Director, Iowa Rural Electric Cooperative Association, says:

"Thank you very much for the film, 'Hot Water Saves Labor.' It is now in our film library here at the State Association office and will be used throughout the State as requested by our 55 member cooperatives. This film was a welcome addition to our limited library. It should receive a lot of use in Iowa."

It's Yours For $7.95

Imagine getting this 15-minute film, plus a bonus (for distribution after showings) of 100 copies of a new, revised 12-page descriptive booklet—"The Modern Automatic Electric Water Heater." This edition, printed in two colors, covers the advantages of the automatic, electric water heater on the farm.

The film itself covers such features as how the *Electric* Water Heater can cut down milk reject slips, eliminate water toting, speed up bathing, dishwashing, clothes washing and other household tasks. The story also covers the barn, milk house, chicken house—or anywhere else where hot water may be needed. *Plan to use it at your meetings!* ***Just mail the coupon!***

ELECTRIC WATER HEATER SECTION
National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

ALLCRAFT • BAUER • C-E HEATMASTER
CRANE SELECTRIC • CROSLEY • FAIRBANKS-MORSE
FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT
HOTSTREAM • JOHN WOOD • KELVINATOR • LAWSON
MONARCH • NORGE • PEMCO • REX • RHEEM
SEPCO • A. O. SMITH • THERMOGRAY • WESTINGHOUSE

ELECTRIC WATER HEATER SECTION
National Electrical Manufacturers Association
155 East 44th Street, Dept. RE-4-56, New York 17, N. Y.

Please send me_____prints of the sound-slide film—"HOT WATER SAVES LABOR"—complete with record and 100 copies of the booklet, "THE MODERN AUTOMATIC ELECTRIC WATER HEATER," all for the price of $7.95. (Price does not include shipping charges.)

Your name_____ Title_____

Organization name_____

Address_____

City_____ State_____

LETTERS

NRECA Movie

I am happy to write you about our early experiences with the new NRECA film.

We used it first to show to all of our employees in the home office here in Denton and the three District offices. It was very timely for this purpose, since we have done considerable orientation training during the past year in an effort to increase our employees' enthusiasm about the program. Only a well informed employee will be enthusiastic about his employer and his job—and, in my opinion, it is particularly important to make good-will salesmen of your employees in this type of business.

The reaction of the employees to the movie was excellent and we encouraged them to try and arrange for its showing at any group with which they are associated.

We next showed the movie at our annual meeting, March 6. We had the largest crowd in history, and by cramming chairs into aisles and every other available space, probably had about 750, with many turned away. This doesn't seem like a large meeting to many, but by comparison with previous years it was good.

A part of the audience could not hear well and the picture was not as clear as it is normally, therefore it was a barely adequate showing. Even so, the picture was well received.

The following evening I showed the film to our local Rotary Club and had an excellent reaction.

I preceded the showing at Rotary with 15 minutes of remarks about the rural electrification program and general information about the film, and used five minutes after the film to show and discuss a chart that illustrated what our local co-op contributes to the area.

I feel the remarks made before the film are essential. The film packs so much information in a small time that the average person not too familiar with the program won't grasp it all, unless at least partially prepared. I hit briefly on seven points: (1) electric utility business is by nature a near-monopoly and under jurisdiction of public service commission in Maryland, whether municipal, nonprofit, or commercial profit, (2) the rural electrification program was born of necessity (very important to keep in mind), (3) electric utility business has highest ratio of investment to sales of any business, (4) rural electrification program hasn't cost the taxpayer anything, (5) Choptank Electric Cooperative is private enterprise and not a government agency, (6) electric utility business does not stand still, and (7) we should all be concerned with full and proper development of our natural resources. Then a word about NRECA, who it represents and what it does, actors not professional, this is our print, glad to show anywhere, etc.

To cover above in 15 minutes required organization of remarks and only hitting highlights, but seemed to prepare a group of businessmen for what was to come in movie. Even though a lot of it is repetition of information in the movie, I recommend the procedure for such a showing.

More important was the chart and few remarks after the film, bringing the information on the program to the local level. This emphasizes the need for securing an extension of the film for this purpose, but an effective job can be done with a chart. Our chart showed the percentage of farms electrified in our territory since 1938, our total investment, the number of members and people we serve, our monthly payroll and number of employees, the annual taxes we pay, our monthly wholesale power bill and how much we pay monthly on the principal and interest of our loan. Before a group of local businessmen the payroll figure alone is enough to sidetrack questions that are not intended to be constructive.

The movie gives us another excellent opportunity to get our program before our employees, our members and the public. We are promoting opportunities to do so at every opportunity. We expect to send a letter to local farm organizations, civic clubs and other organizations, advising them we have such a film and will be happy to loan it or send it with a speaker. We feel the purchase price has already come back to us in better member and public relations, from the few showings outlined above.

JOHN W. ASHER, JR.
Assistant Manager,
Choptank Electric Cooperative,
Denton, Md.

Annual Meeting Praise

I feel that it was a great privilege and honor to be one of the program committee for this year's annual NRECA meeting, and I had wonderful cooperation from the ladies asked to serve with me. I think, however, the greatest praise is due Mrs. Millbrook for she really did all the hard work and planning.

I think you would like to know that the manager of the "Cinerama Holiday" told me that the bus and taxi drivers and others who had contact with the NRECA group agreed that it was the nicest, most courteous group ever to visit St. Louis. That's quite a tribute, but we knew it all the time, didn't we? I'm more than proud to be one of them.

MRS. WALLACE MILTON
Ozark, Ark.

War Chest Suggested

During the discussion period following our power panel in St. Louis, a number of suggestions were made relative to a special "War Chest," or fund, which might be set up by the co-ops to expend in the interests of a more certain future power supply. While no details were considered, it was suggested there that the president of the Association might appoint a committee to investigate the feasibility and advisability of such an action.

One specific suggestion that I have to offer is that each co-op, or public power district in the United States, be urged to set aside one-half of 1% of its annual power cost and expend this amount each year for the purpose of securing an adequate and certain power supply. Fifty percent of the co-ops' allocations would then be assigned to a special NRECA fund for such related purposes as the NRECA Board might deem advisable. The local co-op would then allocate the other 50%

MOST ADVANCED HYDRAULIC DERRICK EVER BUILT

POWERS American®

PROUDLY PRESENTS

the Sensational New Pole-Master® PM-2

HYDRAULIC DERRICK

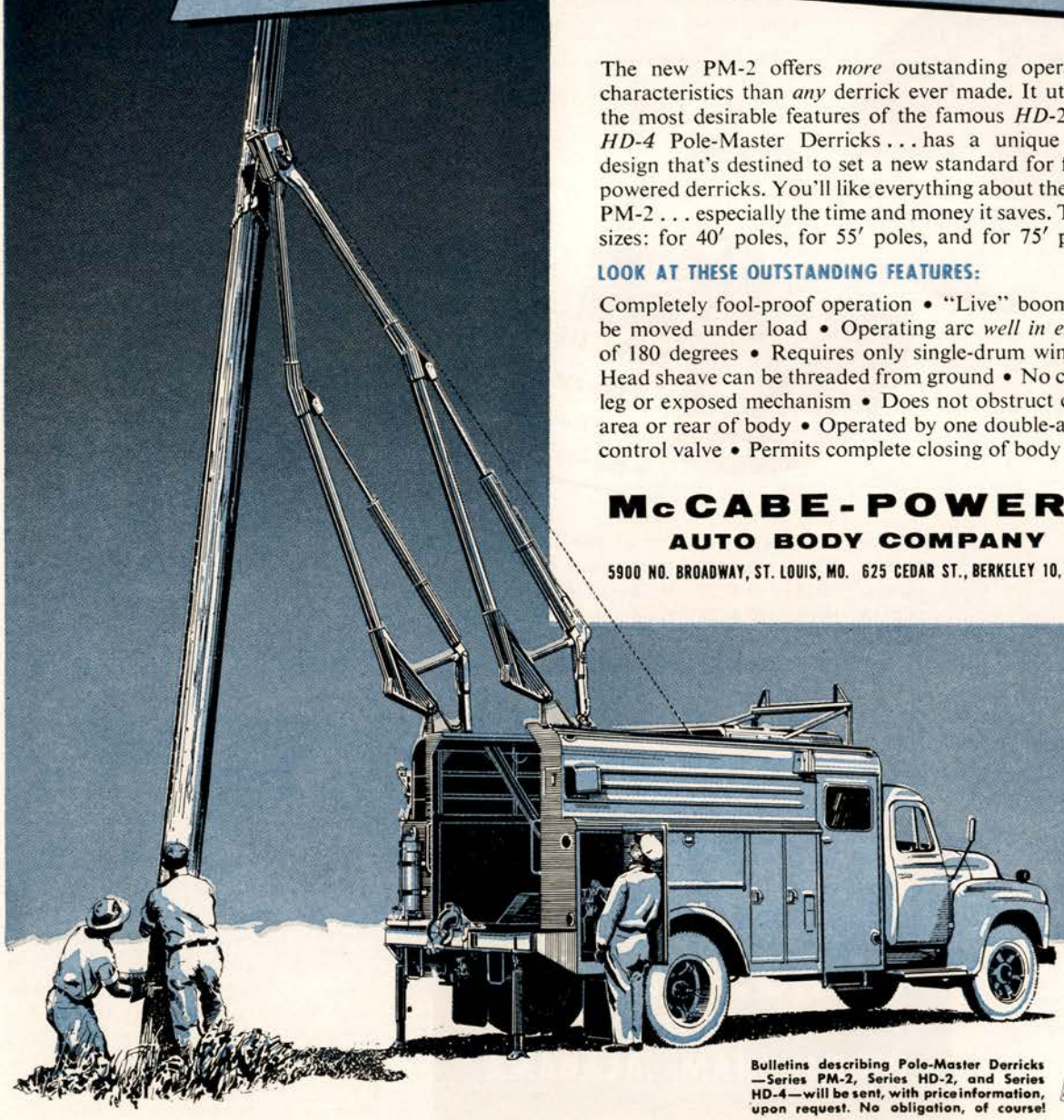
The new PM-2 offers *more* outstanding operating characteristics than *any* derrick ever made. It utilizes the most desirable features of the famous *HD*-2 and *HD-4* Pole-Master Derricks . . . has a unique new design that's destined to set a new standard for fully-powered derricks. You'll like everything about the new PM-2 . . . especially the time and money it saves. Three sizes: for 40′ poles, for 55′ poles, and for 75′ poles.

LOOK AT THESE OUTSTANDING FEATURES:

Completely fool-proof operation • "Live" boom can be moved under load • Operating arc *well in excess* of 180 degrees • Requires only single-drum winch • Head sheave can be threaded from ground • No center leg or exposed mechanism • Does not obstruct cargo area or rear of body • Operated by one double-acting control valve • Permits complete closing of body roof.

McCABE-POWERS AUTO BODY COMPANY

5900 NO. BROADWAY, ST. LOUIS, MO. 625 CEDAR ST., BERKELEY 10, CALIF.



Bulletins describing Pole-Master Derricks —Series PM-2, Series HD-2, and Series HD-4—will be sent, with price information, upon request. No obligation, of course!

to local or statewide programs to which its own needs were peculiarly related.

With the co-ops' wholesale power costs running about $125-million now, the half of 1%, which I suggest, less non-participating groups, would give us a sum of approximately one-half million dollars. The NRECA half of that total would be sufficient for some national advertising, both magazine and radio, and possibly even some TV. The local share would, of course, be far more than is now being spent for such purposes and could be used for local advertising and the support of such local programs as the Niagara Committee, Hells Canyon Association, Citizens for TVA, and so on.

POWERS LUSE

Manager,
Hancock-Wood Electric Co-op,
North Baltimore, Ohio.

EDITOR'S NOTES

Two power companies are applying pressure to get **control of another electric co-op** in the Pacific Northwest. . . . Washington Water Power Company is one, and Sandy Rural Electric Co-op is the victim marked for the sellout. . . . In this case a permit to serve a forest service area where a $1½-million recreational project is due to be built is the big plum sought by the co-ops. . . . Sandy Rural Electric has the only permit to serve the forest preserve. . . . Utility interference in any membership vote is anticipated, because the stakes are potentially high.

* * *

Oregon's Attorney General Thornton is trying to **stop Idaho Power Company** from destroying the Federal site for Hells Canyon by construction of smaller dams. . . . Pressure originated with Isaak Walton League, and follows their objections to Pelton Dam by an Oregon power company because of conflicting fishing interests.

* * *

Texas electric co-op leaders were told at the **Bureau of the Budget** that the Administration is following recommendations of the President's Advisory Committee on Water Policy. . . . The report was labeled a "little Hoover Commission" document at NRECA's annual meeting in St. Louis. . . . Whether the recommendations require legislative action is a debatable question, but Congressional action may be demanded to prevent following the Advisory Committee's proposals. . . .

Southwire Trucks Make 1089 Trips and Cover 2 Million Miles a Year

To provide service on a par with Southwire quality

We learned a long time ago that, in this business, to win customers and keep them, service must be on a par with the quality of products. That's why Southwire operates its own fleet of modern trucks over a vast network—from Minnesota to Florida, from Pennsylvania to Texas. It is your positive assurance of dependable deliveries—direct to your warehouse or job site.

Southwire products are produced in our own modern plant to meet the most exacting requirements and specifications. Their quality is controlled from start to finish, checked and re-checked every step of the way, to give you the best.

Next time order Southwire products and get Southwire service automatically.

SOUTHWIRE PRODUCTS

- Bare and Weatherproof Copper and Aluminum Line Wire
- Neoprene Copper, Aluminum and Triplex
- Polyethylene Copper, Aluminum and Triplex
- Copperweld® Conductors
- Copper and Aluminum Building Wire
- ACSR and All Aluminum Cable
- Steel Guy Strand and Static Wire
- Aluminum Alloy Wire
- Cable Accessories

Southwire Company

Carrollton, Georgia • Terrace 2-6311

meet your company's top representative

PENTA preserves poles' attractiveness and protects their soundness, too

Hundreds of people meet your poles every day. Hundreds of impressions, good or bad, result. One thing for sure: they'll be *good* if you're using PENTA-treated poles.

PENTA* preservative treatment leaves poles clean and naturally attractive. They meet the strictest civic requirements, and win community appreciation of your system's interest in sound public relations. These strong, protected poles are direct evidence of your interest in sound operations, too. PENTA resists rot and termites years longer. This means less service trouble and expense for you, less inconvenience for your customers. Service records, available on request, verify the outstanding protection you get with PENTA.

Here's why your maintenance people are so "high" on PENTA treatment: this uniform, single-compound preservative gives a running check on pole life expectancy. When you simply measure the amount of PENTA present in the pole at any given time, you're measuring the amount of protection, too.

Yet clean, better-protected PENTA-treated poles cost no more than equipment treated in less completely satisfactory fashion. You'll have no trouble getting them promptly, either . . . over 100 suppliers all around the country treat poles and crossarms protected with effective *PENTAchlorophenol. For more information, please write to THE DOW CHEMICAL COMPANY, Dept. PE980D, Midland, Michigan.

you can depend on DOW CHEMICALS

DOW

"BRIEFLY" --- Late News and Comments

INTERIOR SECRETARY DOUGLAS McKAY'S FORMAL RESIGNATION DATE HAS BEEN MOVED UP TO April 15 so that he may seek the nomination for the Oregon senatorial race against Sen. Wayne Morse. . . . McKay first set June 1 as the approximate time of leaving Interior, but his primary opposition has refused to withdraw in his favor. . . . Murray Snyder, White House assistant press secretary, said that McKay's letter will not be made public until President Eisenhower replies, although he has Eisenhower's "blessing" . . . McKay said, "I'll either be a Senator or I'll be free," stating that he wouldn't rest easy in retirement unless he tried to unseat Morse. . . . (See story page 22.)

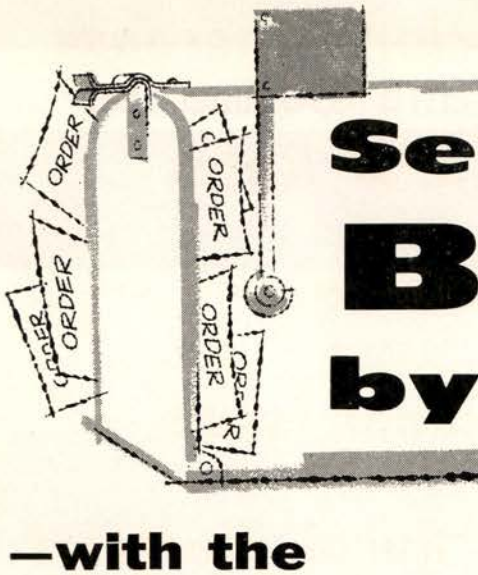
A MAJOR VICTORY FOR TVA . . . THE HOUSE ON MARCH 23 AUTHORIZED TVA TO USE ITS power revenues to build new generating units at existing steam plants. . . . Action was tentative and subject to a final vote if a tally is demanded. . . . TVA Congressmen expressed confidence the battle had been won. . . . The majority party on the House Appropriations Committee said in its formal report that the Committee had decided to "reaffirm" TVA's right to spend its own power revenues for additional generating units. . . . The fiscal 1957 Federal Budget indicates TVA is expected by the Administration to remit all power revenues to the Treasury. . . .

MORE FEDERAL POWER WILL BE AVAILABLE TO PREFERENCE CUSTOMERS IN THE MISSOURI RIVER Basin, according to an Interior announcement issued late last month. . . . Bureau of Reclamation officials said that better water conditions will enable them to make 89,000 kilowatts of additional firm hydro-electric power available. . . . Part of the additional power in the upper basin will go to customers in North Dakota, South Dakota, Minnesota, Iowa and Nebraska. . . . Some power will increase the supply to present customers and some will go to new preference customers. . . .

VIRGINIA GOVERNOR THOMAS STANLEY PRESENTED A PLAQUE TO NRECA PRESIDENT JACK SMITH, citing his valuable contributions to the rural electrification program in America. . . . The plaque was presented at a dinner of the Virginia Association of Electric Cooperatives at which most of the members of the General Assembly of Virginia were present. . . . Stanley congratulated Smith on his election for a third time as president of the National Rural Electric Cooperative Association. . . . Stanley also pointed out the value of the rural electric cooperatives to rural Virginia and to the nation's farmers. . . .

ARKANSAS' REGULATORY COMMISSION REFUSED A $4,200,000 RATE INCREASE REQUEST BY THE Arkansas Power & Light Co., last month. . . . AP&L announced it would appeal to the courts. . . . Reports indicated the Commission's decision was influenced by testimony of Dr. Henry Blalock, consultant for Southwest generation and transmission co-ops. . . . The Commission decision said AP&L is earning 5.86% presently, while maximum return allowable is 6%. . . .

U.S. ATOMIC ENERGY PROGRAM SHOULD BE SHIFTED FROM PLANNING TO BUILDING BY encouraging participation of all interested groups, including large scale reactor construction by the government, says Charles Robinson, NRECA staff engineer, who testified at closed hearings of the House Appropriations Public Works Subcommittee March 26. . . . Robinson also says Congress should direct Interior to negotiate sale to Georgia rural electrics of Clark Hill power. . . . Last year the committee successfully directed Interior to sell Kerr Dam power to North Carolina co-ops. . . . The proposed SPA 40% rate increase was reportedly criticized; further testimony dealt with the Federal power program. . . .NRECA supported some Administration budget requests, asked increases in others and urged funds for several projects omitted by the Administration. . . .



Sell more BUG LITE by mail

—with the SYLVANIA Box-of-Bulbs Package

SPRINGTIME is your clue, Mr. Manager. Summer bug-time is fast drawing near. Enemy bug will be back to haunt and bite co-op members—'specially when there's work to be done or relaxation to be enjoyed outdoors after dark.

But the bug need not pester your members, Mr. Manager. You can offer them Bug Lite *by mail*—special yellow coated outdoor bulbs which have less attraction for insects than has ordinary lighting. Sylvania makes Bug Lites available in two separate light bulb assortments with self-mailing Box-of-Bulbs cardboard cartons. (*See listings below.*)

With the Bug-Lite Box-of-Bulbs package, you'll be able to fill empty sockets with bulbs of proper types and wattages. Bug Lite makes ideal lighting for roadside stands. Your members will appreciate the convenient service you give them. And you'll be building more of your best kind of electric load—*lighting*.

Sylvania's Box-of-Bulbs makes it easy to sell lighting by mail. Sylvania furnishes the cartons, packaging tape (printed with your own "Willie Wirehand" emblem), shipping and "handle-with-care" labels—*all for only a few cents per carton!*

"Sylvania has pioneered the Box-of-Bulbs as a load-building program among co-ops. With changes of season you can feature any combination of light bulbs you wish—Bug Lites, Heat Lamps, Reflector Lamps, etc., with standard bulbs. Write us today for complete information on this tested and proved way to build lighting load."

(Signed) Ervin Baker
Manager, Rural Lighting Sales

SYLVANIA ELECTRIC PRODUCTS INC.
Dept. 6L-6904—Lighting Division, 60 Boston St., Salem, Mass.

SYLVANIA®

. . . fastest growing name in sight

LIGHTING • RADIO • ELECTRONICS
TELEVISION • ATOMIC ENERGY

Your choice of 2 Bug-Lite Assortments for the Sylvania Box-of-Bulbs Package

2—100-Watt Bug Lites	$ .58*	2—150-Watt Bug Lites	$ .78*
2—60-Watt Bug Lites	.50	2—100-Watt Bug Lites	.58
4—100-Watt Regular	.88	2— 60-Watt Bug Lites	.50
4—150-Watt Regular	1.00	4—100-Watt Regular	.88
12 Bulbs	$2.96*	2—150-Watt Regular	.50
Total Watts 1320		12 Bulbs	$3.24*
Average Wattage 110		Total watts 1320	
		Average Wattage 110	

*All prices suggested list.

Exchanging greetings at the SPA rate increase hearings last month are Clyde T. Ellis, NRECA general manager (left) and Sen. Strom Thurmond (S. C.), who recently resigned his Senate seat to seek re-election in the state primary.

Interior's Increase Of SPA Rates Becoming National Issue For Rural Electrics

WHAT'S good for the goose is good for the gander, NRECA economist Dr. Clay L. Cochran implied last month, while urging Congress to cancel interest requirements on Federal power projects equivalent to the subsidies given to privately-owned electric utilities through rapid tax amortization certificates.

Testifying before the Joint Senate and House Public Works and Interior Subcommittee's hearings on a proposed 40% rate increase for Southwestern Power Administration, Cochran charged that Office of Defense Mobilization has given the nation's power companies interest-free loans in excess of $2.7-billion to expand their power facilities. Cochran told the subcommittee members that the total benefits accrued from the interest-free loan by the power companies over a 33-year period would exceed $4-billion. Additionally, he pointed out that power companies have applications for $1.6-billion awaiting approval by the office of Defense Mobilization.

He explained that it was inconceivable that one government agency (Interior) could be raising Federal power rates to rural electrics and other preference customers, at the same time that another agency (Office of Defense Mobilization) was giving huge subsidies to the non-preference element in the electric utility industry.

NRECA General Manager Clyde T. Ellis and Charles Robinson, NRECA engineer, along with Angus McDonald, assistant legislative secretary for National Farmers Union, and Alex Radin, general manager of the American Public Power Association, also testified at the inquiry chairmanned by Sen. Robert Kerr (Okla.).

Other highlights occurring as the hearings headed into the third week included:

—Kerr and Representatives James Trimble (Ark.) and Carl Albert (Okla.) introduced bills in Congress which would require Interior and SPA to continue to charge rates that existed on February 28 to rural electric co-ops until June 30, 1957.

—Assistant Secretary of Interior Fred G. Aandahl refused to agree to the 18-month postponement of what has been labeled an "unnecessary and destructive" 40% wholesale power increase for rural electric co-ops in the SPA area.

—Ellis urged that the Kerr-Trimble-Albert bills to freeze SPA's present rates be sent to the Senate and House floors with priority so that they could be passed by both Houses as a stop-gap measure. Ellis was supported by the Farmers Union and the American Public Power Association, but all parties emphasized that permanent substantive legislation was needed to protect rural electric co-ops and other preference customers against inflating power costs with higher cost allocations, depending on the political philosophy of Interior officials.

Robinson declared that if the Department of Interior had considered extended amortization periods of up to 100 years and elimination of power company subsidies in contracts with SPA in lieu of a 40% rate increase to achieve a reconciliation of increased project construction costs, the rate increase now proposed would be unnecessary or grounds, at least, would be substantially below the rate now proposed.

The Kerr inquiry thus far has developed the fact that the seven hydro

Lloyd Evans, president of KAMO Generation & Transmission Co-op, Vinita, Okla., meets Sen. Roman Hruska (Nebr.), on the right, during the SPA rate increase hearings last month. Looking on is T. E. Bostick, manager of Woodruff Electric Co-op, Forrest City, Ark., who testified against the proposed 40% SPA rate increase, because of the disastrous effects it would have on rural electric consumers.

Southwestern Power Administrator Doug Wright said in his testimony before the Joint Committee of Interior and Insular Affairs last month that the rural electric co-ops and other preference customers were subsidizing low-cost power rates to private power companies in the Southwest.

NRECA General Manager Clyde T. Ellis emphasized the seriousness of the proposed 40% rate increase to rural electric co-ops who purchase wholesale power from the Southwestern Power Administration, by pointing out that over 44% of all rural electric co-ops' idle services are in the Southwest.

The national total of farms which have disconnected services from rural electric systems is 220,628. Of that total 97,367 are in the six-state SPA area. Following is a state-by-state breakdown: Arkansas, 24,887; Missouri, 22,110; Oklahoma, 15,273; Texas, 25,336; Kansas, 5,434; Louisiana, 4,327.

dams in the Southwest were designed basically and primarily as flood control projects, and in some cases the original authorization for the dams did not include power facilities. Traditionally, the Southwest flood control projects' cost allocations have been determined on an incremental basis—the additional cost of adding power facilities to flood control projects is determined to be the cost allocated to power.

The record also indicates that Assistant Secretary Aandahl, who admits that he personally directed the proposed 40% SPA rate increase, has artificially increased costs allocated to power in the Southwest projects by switching from the traditional incremental method of cost allocations to the separable cost-remaining benefits method. The latter, in many instances, places the highest possible cost on power facilities, according to engineers.

Cochran, who heads NRECA's Legislative, Management and Research Department, told the Committee that it was unfair to discuss reallocating costs of Federal projects without discussing tax write-off subsidies received by power companies.

Tax Subsidies Illegal

Reviewing the history of the tax write-off program, Cochran pointed out that many projects ODM has approved for tax subsidies cannot be justified under a strict interpretation of the Act, which provides subsidy for only the part of an electric utility project that relates to defense effort. Recently, ODM broadened its authorizing regulations for tax write-offs to cover "defense mobilization" rather than the "national defense" limitation.

Subsidies Inequitable

Cochran contended that it was inequitable to give rich corporations interest-free loans and then turn around to levy 2½% to 4% interest charges on inflated cost allocations at Federal power projects, which is the current policy of the Administration.

Generally, the rapid tax write-off certificates allow the power company to depreciate a facility 20% per year over a five-year period. Normally, a power company depreciates facilities at a rate of 3% over 33-1/3 years, said Cochran.

Depreciation of a million - dollar project over a five-year period would be $200,000 a year. Under the normal procedure it would be only $30,000, he continued. The difference between the two procedures, after deducting the 52% corporate tax on net income, is $88,400 in taxes retained per year. Multiplying that by five reveals the total interest-free loan.

Assuming that the power company would pay 6% annually on a loan in the money market, a 6% return on the interest-free loan projected over the 33-1/3-year life of the project provides the total subsidy involved, Cochran explained.

Robinson stated that the proposed revision of SPA rates would encourage the sale of all SPA power to a few large groups capable of using it in connection with existing generating facilities of their own, and to make firm energy so high in cost as to discourage its purchase.

"This is," he declared, "a policy which is not only completely out of accord with established Congressional policy, but it is shortsighted from the viewpoint of the government." If successful, it will lead to the sale of all SPA power at a loss to the government, he said.

Robinson refuted Aandahl's charge that one cause for the proposed SPA rate increase was the fact that Congress reactivated the old SPA contracts with generation and transmission cooperatives.

He pointed out that there was an $805,500 subsidy each year which goes to the Arkansas Power & Light Company under its joint contract with SPA and Reynolds Aluminum Corporation.

Robinson also stated that there is approximately $400,000 in subsidies going to the Public Service Company of Oklahoma and the Oklahoma Gas & Electric Company under the so-called Oklahoma contract.

Kerr said that the proposed legislation to freeze SPA rates for 18 months was designed to provide sufficient time for Congress to ascertain whether or not the proposed SPA rate increases are fair and justified. Fifteen Senators are co-sponsoring Kerr's bill. They include members from both parties.

Despite Aandahl's refusal to agree

(*See SPA RATES, page* 54)

Apprentice Lineman "Buzzy" Bechtold locates aircraft position on special map which has distances indicated by concentric circles radiating from the co-op headquarters. Planes are located by distance and direction from the cooperative headquarters.

An outpost crew spots a high-flying multi-engine aircraft and prepares to relay information.

Communication on the two-way radio begins with the words "Aircraft Flash." Information relayed to the office is in a specific sequence starting with the number, type, altitude, location and direction of flight of the aircraft under observation.

Co-op Public Service Aids Defense

By MARK D. STENSON,
Manager, Cherry-Todd Electric Co-op, Valentine, Nebr.

RURAL electric systems are wasting a terrific public service opportunity every day of their operation if they do not utilize their outside personnel for participation in reporting of aircraft through the facilities of the Ground Observer Corps. At the present time, there are nearly one thousand rural electric organizations operating in the United States and assuming that these systems have an average of five vehicles operating under normal conditions, the Ground Observer Corps could have an additional 5,000 mobile observation posts with little effort and no inconvenience to the present operation.

Rural electric organizations are inherently a service group and this would be a definite service to not only their members, but also the general public. The effort necessary to participate in the Ground Observer Corps operation is so slight that it is truly sad that so few have seen fit to lend their support. You can rest assured that any activity in this program would be welcomed with open arms by the Air Force.

Recently we instituted a program to actively cooperate in the Ground Observer Corps operation. By utilizing our outside personnel, together with radio-equipped vehicles, we report all aircraft observed in the cooperative area in accordance with policies set up by the Air Force.

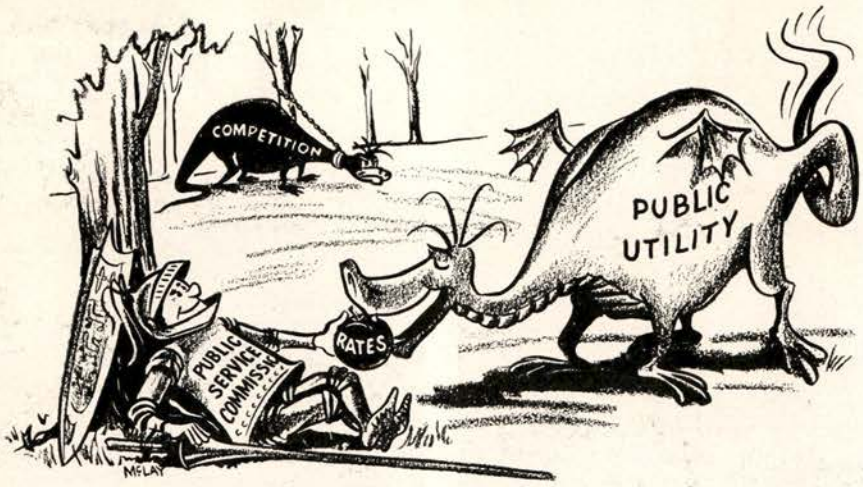
Participation in the aircraft reporting service first involves approximately two or three hours of training for both inside and outside personnel in the correct procedure of aircraft reporting. The attempt is, of course, to report formations of more than one aircraft or multi-motored and jet powered aircraft (not including bi-motored) to the associated filter center as rapidly as possible. Each of the co-op vehicles is equipped with a system map having concentric circles outward from the rural electric headquarters location to indicate the airline distance from the headquarters facilities. Maps also designate the eight primary points of the compass to facilitate the identification of directions from the map. This is the only additional equipment required for participation in the program.

Upon spotting an aircraft or a formation, even a vapor trail, the line crew waits until the aircraft is as close to their location as his direction of flight indicates he will ever be and then by two-way radio reports the number, type, altitude, distance from the operating headquarters determined by the system map, and the direction of his flight. This information is logged on the appropriate Air Force furnished form at the organization headquarters. When the message is received, the time is noted and recorded immediately since the personnel in the headquarters must quote to the filter center any time delay that occurs from the original receipt of the message by two-way radio until the flash is actually given to the filter center personnel. If aircraft can be heard but not seen, as is often the case in high flying jets, the report is still made by the outside crews by merely indicating that an unknown aircraft is in their particular area. In most such cases it is possible to report the direction of flight only by following the sound. On occasions of complete overcast, reporting of unknown aircraft is commonplace since they usually operate at relatively high altitudes.

Total time requirement for an aircraft report normally does not exceed two minutes. This means that there is practically no interruption of outside operations or office routine. Just one report of a hostile aircraft in sufficient time to complete its interception would repay all time and money expended by participating organizations for many, many years.

I strongly urge that all rural electric organizations contact their county or state Civil Defense chairman or, if available, the local Ground Observer Post Supervisor and take steps to participate in this vital operation.

Special rights—special obligations—



. . . a public utility is a special kind of creature!

EXPOSING A MYTH

Commercial Power Companies Are Public Utilities, Co-ops Are Not

Second of a Series

By LARRY POTAMKIN

Secretary, NRECA Lawyers' Committee

IF, in all our discussions involving the status and rights of a commercial power company, we would always keep in mind the fact that such a business exists as a *public* utility there would be less confusion. Because the power company is not engaged in free enterprise, all discussions involving the rights of a free enterprise type of business should be avoided. They cannot be related to the problem and only serve to confuse. Also, the fact that it is privately-owned is of minor importance, since that type of private ownership is not entitled to unrestricted profits. The really controlling concept in all of these problems is that the power company is a public utility.

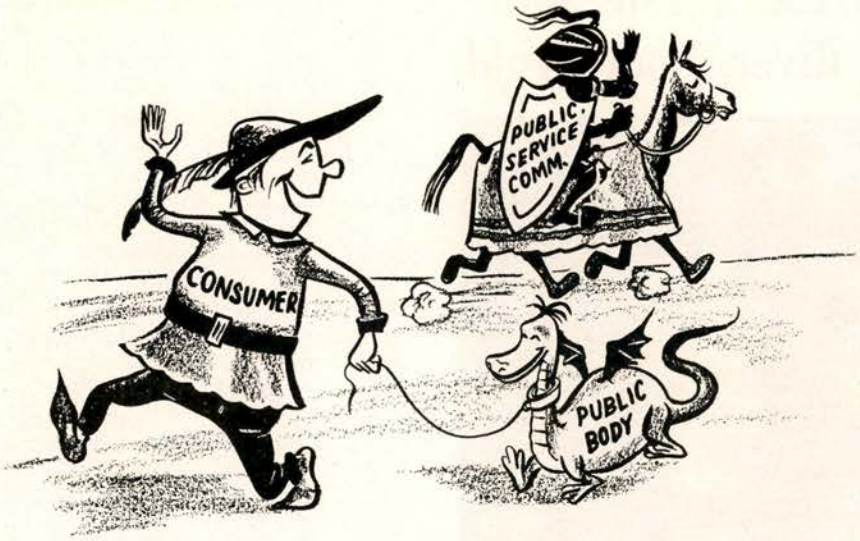
A public utility is a special kind of creature and is treated in a special kind of way. In the complexities of modern day living, there are certain products or services which are so essential to the welfare of the individual citizen and of the community as a whole that any organization engaged in furnishing them is classified as a public utility. A public utility has certain special rights, but it also has specific obligations. A public utility is given a completely protected monopoly for its service or product in its area of service. No competition with it is permitted. This is its special right. To counterbalance this special right of monopoly service, a public utility is required to serve everyone in its service area who complies with the conditions of service which are applicable to all consumers. So, although a public utility has no competition, in turn it cannot choose its customers, but must serve all. Also, because it is a monopoly, protected from competition, a public utility is entitled to charge only such rates as will give it a pre-determined fair return on its investment. The rates that it charges are determined by the government body which regulates it, such as the State Public Service Commission or, in interstate transactions, the Federal Power Commission. In making a determination of what rates shall be charged, the regulatory body determines what percentage figure would give the power company a proper rate of return on its investment. That is, the rates which are approved are those estimated to bring in enough, but only enough, income to cover the company's operating expenses and provide that rate of return which the Commission has determined to be fair. If the system worked perfectly, the total income would always be just enough to provide the utility with just the right amount of money to meet its expenses and yield the specified percentage of net income.

It was long ago realized that the free competition of the market place could not be permitted where essential services to the public were involved. The dangers were too great. In a fully competitive situation, there is not only the opportunity to make greater profits, but there are also the possibilities of going broke. For example, suppose there were two electric companies freely competing for the electric business in a city. One of them may be much more efficient than the other — and may actually force the other out of business. What about the customers the failing business was serving? Are they to be without electric service? Yet the only way to continue electric service to them

If utilities were not controlled—

"Don't go away, Honey, we have a date for supper!"

Public Bodies—



They are controlled by the consumers and frequently regulations don't exist.

would be to have someone else take over the job of serving them. If a new company did this, the possibility is created of the same situation recurring. If the surviving company took over, it would obtain a monopoly for this essential service. It then could charge almost any price it chose to. Also, it could refuse to give service to some—it could even control the destinies of other businesses by denying electric service to a particular business establishment because it liked his competitor better. Obviously, such a condition would create chaos.

There are many other reasons why it was found that free competition—free enterprise—could not be allowed where this type of service was involved. For example, no matter how efficient a company was, the competitive situation would make it do inefficient things. To reach customers in an area where its competitor also had customers, it would have to build lines even though its competitor's lines were already there. There would be a great and wasteful duplication of facilities. There would be costly, cumbersome, and unattractive cluttering of the streets and highways with duplicate sets of poles.

These and other considerations showed clearly that in this type of essential service to the people free competition—free enterprise—would actually be harmful. So there was developed the concept of a public utility where the company dealing in the essential public service is given complete freedom from competition, but at the same time has its rates and conditions of service controlled. And, of course, it is given the duty of serving all who want service and who can meet the conditions applicable to all equally, as determined by the regulating government body.

The commercial power company is this type of organization, and it is subject only to the rules and considerations applicable to a public utility. The rules and theories that we apply to a free enterprise type of business have no relationship to it.

Although a public body, such as a municipally-operated electric system, is as much a public utility as any commercial power company, all of the normal rules applicable to the commercial power company are not always applicable to the public body. It is, of course, in the same protected monopolistic position as the power company-public utility. However, although in many places it is made as fully subject to a regulatory body, this is not always the case. There are many places where the public body is not regulated as to the rates it can charge. The reasoning behind this freedom from regulation is based upon both the non-profit nature of the public body's operations, and the identity of ownership and consumer status. In other words, the local citizenry who are in the final analysis the owners of the publicly-owned electric system, and who by their votes as citizens can control all of the policies of management — including the rates charged, are also the consumers. Since the purpose of regulation is primarily to protect the consumer, to impose regulation for that purpose in the case of a public body would really be to protect the consumer from himself. Also, as far as unreasonable rates are concerned, not only can that be controlled by the citizen-consumer in the case of a public body, but if there is excess income, it would inure to the benefit of the consumer. It would either reresult in lower rates or it would be used for some other purpose that would benefit him. In the case of a public body, there is no place for extra money to go except back to the consumer in the form of lower rates of extra service. This is very different from the case of the commercial power company, where extra income can go to the stockholder in the form of higher dividends. In other words, because the owner is also the consumer in the case of a public body, it is felt in many places that the reasons for regulation do not exist. Such a public body is still a public utility, the only difference being that it is a self-regulated public utility.

The rural electric cooperative is not a public utility. An essential element of a public utility is that it offers its service and its product to the public generally. The cooperative

(*See MYTH, page* 48)

Opinions Differ—

Artist's note: This is a non-political elephant. It might as well have been a donkey except the old fable we got our idea from called for an elephant.

Hells Canyon Issue Partial Versus Full Development of Snake River, Court Told

Opponents' Brief Asks Court to Reverse "Giveaway" Decision

Hells Canyon's battleline was drawn along comprehensive development versus partial development of the middle stretch of the Snake River—not the popularly conceived public versus private power issue—in the National Hells Canyon Association's brief filed before the U. S. Court of Appeals last month.

The NHCA brief urged the Court of Appeals to reverse the Federal Power Commission's decision approving the Idaho Power Company's three small dams for the Hells Canyon section on the grounds that it was accomplished through "administrative lawlessness," and constituted "wasteful underdevelopment" of the vast hydro-electric and flood control potential of the Snake River.

Mrs. Evelyn Cooper

Approval "Inconsistent"

FPC's approval of the three small dams in preference to a high Federal Hells Canyon project to fully develop the Snake River potential, proposed by the Bureau of Reclamation, was based on "arbitrary distortions and inconsistencies," the apppeal brief charged.

The law firm of Mrs. Evelyn Cooper and Lucien Hilmer filed the brief in behalf of NHCA, NRECA and eight Washington public utility districts. Each of the petitioners had endorsed the Bureau of Reclamation's proposed high Hells Canyon Dam for comprehensive development.

The 91-page brief asked that the Idaho Power Company licenses for the three dams, approved by FPC last August 4, be reversed, and that the court disallow the FPC order of November 3 which permitted Idaho Power Company to make the design changes without public hearings.

"From stem to stern," the brief declared, FPC's approval of Idaho Power's three small dams and its post decision approval of change in construction design "constitute both in substance and in procedure, an historic example of administrative lawlessness."

The Hells Canyon battle dates back to 1950, when the Army Corps of Engineers presented a comprehensive plan for the development of the Columbia River Basin. Congress has never authorized the Hells Canyon project, although a bill by Sen. Wayne Morse (Oreg.) has been approved by subcommittees in both the Senate and the House in the present Congress. Former President Harry Truman and Former Secretary of Interior Oscar Chapman planned to fight the Idaho Power Company's three small dams by intervening before FPC.

Approximately four months after Secretary of Interior Douglas McKay took office, the Department of Interior withdrew an intervenor's petition before the FPC. It was McKay's first and only press conference, and coincided with the board of directors meeting of the Idaho Power Company in Augusta, Me. The Idaho Power Company is a Maine corporation.

Costello Not Challenged

The FPC commissioners, the NHCA brief charged, did not challenge Examiner William Costello's finding that Idaho Power's plan would produce 400,000 kilowatts of prime power less than a high Federal dam. The commissioners also acknowledged that the power from the Federal dam would cost consumers 2.7 mills per kwh, whereas the cost of power under the Idaho Power plan would be 6.69 per kwh, approximately three times more expensive than the high dam.

The commissioners admitted that the high dam would provide 1.3-million acre feet more of flood control storage than the Idaho Power Company plan. Also the commission found that the high dam would provide 2.88-million acre feet more usable storage capacity than the Idaho Power Company's small dams, the brief said.

The commissioners also conceded that the high dam "would provide more navigation benefits than the three-dam plan," and that measured in dollars the benefits from the high dam would exceed the Idaho Power Company's small dams by $81,000 to $100,000 per year. Over the 50-year amortization period for the two projects the difference would amount to between $4-million to $5-million.

Approximately 6% of the nation's phospate rock reserves are located in Idaho and Utah. Examiner Costello stated, and the commission agreed, according to the brief, that "there appears to be a growing regional and national need for high concentrate phosphate fertilizer.

"The high dam project providing power at low rates might be expected to stimulate large scale development of phosphate resources and large scale expansion of fertilizer production . . . The three-dam plan would stimulate less phosphate development and less fertilizer production than the high dam project."

Draper Resigns

Claude Draper

Federal Power Commissioner Claude Draper's request for retirement was accepted by President Eisenhower last month.

Draper is a native of Cheyenne, Wyo., and has been a Republican member of FPC since December 22, 1930. He was appointed for two terms by Herbert Hoover, two by Franklin D. Roosevelt and two by Harry S. Truman.

84th Congress Must Act or Face "Do Nothing" Record

Campaign Contributions Given Great Importance Instead of Legislation

By SAM PORTWINE

Will the 84th Congress become a "do-nothing Congress" as former President Harry Truman successfully tagged the 80th Congress in his re-election campaign of 1948?

From the point of effect on the rural electrification program, the pace now being set in the second session of this Congress justifies such speculation, despite a good record during its first session. The burden of proof to the contrary is up to the 84th Congress itself and its leadership—namely Senate Majority Leader Lyndon Johnson (Tex.) and Speaker of the House Sam Rayburn (Tex.).

Rural electric leaders long ago realized that the "yardstick" effect of Federal power has contributed immeasurably to the rural electrification program. Consequently, it has been their policy to support legitimate and feasible Federal projects which would have a beneficial economical effect on rural electric cooperatives, more specifically the American farmer.

Avoiding the political mythology of a public versus private power battle, rural electric leaders have firmly stood by this policy. It is axiomatic that rural electric leaders expect more from Congress than liberal authorization of loan funds for the rural electrification program. A dynamic Federal power program and an equally dynamic rural electrification program has improved the living standard of the farmer, and there is no plateau for living standards, rural or urban, in America.

Rural electric leaders have taken a strongly affirmative position on three proposals before Congress, which, not necessarily in the order of their importance, include: a Federally-constructed high dam at Hells Canyon on the Snake River; a New York State-constructed Niagara River power project with Federal-type preference provisions; a self-financing bill for the Tennessee Valley Authority, and construction of six Federal atomic power plants throughout the nation to stimulate American development of low-cost atomic power, which is now lagging.

Sen. Lyndon Johnson

Rep. Sam Rayburn

Officially and/or unofficially the majority party in Congress has stated that the above proposals are part of their general platform, and that they should be enacted. However, little has been done to date to facilitate their enactment. With the heavy legislative schedule facing Congress, enactment becomes more remote if Congress is to adjourn early to get away for the political campaign.

The Bureau of Reclamation's proposed high dam at Hells Canyon has been endorsed and reaffirmed on innumerable occasions during the last five years by rural electric leaders at the local, statewide, regional and national levels. The issue is not one of public versus private power, but whether the Idaho Power Company should be allowed to partially develop the vast potential of the Snake River instead of comprehensive development by the Federal government.

Authorization for a Federal Hells Canyon project has been favorably acted upon by the appropriate House and Senate Subcommittees. Information reveals that little has been done to get the proposed Hells Canyon legislation to either the Senate or House floors.

The presently proposed Niagara legislation has been endorsed by rural electric leaders at local, statewide, regional and national levels. The present Niagara bill represents a compromise between proposed legislation authored by Sen. Herbert Lehman (N. Y.) and the New York State Power Authority. Lehman originally supported Federal development of the Niagara with preference and necessary transmission lines. The State Power Authority supported state development without preference and without transmission lines. The present Niagara legislation calls for state development with Federal-type preference provisions and necessary transmission lines. The bill does not provide an ideal situation but rural electric leaders feel it is the optimum obtainable.

The Niagara proposal has been favorably voted out of committee in the Senate and a favorable report filed, but has not been brought to the Senate floor as yet. In the House, nothing has been done.

The TVA financing bill has been presented to Congress in two forms. The first was prepared by members of the TVA staff, and has been endorsed and is supported by the majority of the TVA board of directors. This version is also supported by rural electric leaders. The second version was prepared by the Bureau of Budget. It is not endorsed by the TVA board, and is opposed by rural electric leaders, who feel it is an unworkable bill that would destroy TVA rather than take it out of the political arena where it is being potshotted by political demagogues.

There is little evidence that the House Committee has done anything to facilitate the enactment of a satisfactory TVA financing bill. In the Senate committee, the financing bill is being compromised to death behind closed doors. This can be attributed to Sen. Edward Martin (Pa.), who

(*See CONGRESS, page* 58)

A western red cedar pole under test, showing failure near the groundline position. This test at the Forest Products Laboratory is part of an extensive wood pole research program being conducted by the American Society for Testing Materials with the cooperation of wood pole producers, treaters, and users.

A Testing Program For Wood Poles

By **L. J. MARKWARDT,**
Assistant Director,
and
ALAN D. FREAS,
Engineer,
Forest Products Laboratory,[1] Forest Service, U. S. Department of Agriculture

WOOD was among our earliest structural materials, and significantly maintains a prominent place in our modern industrial economy for thousands of uses. No better or cheaper material has been found for such heavy service as wood poles and railway ties.

Some five million treated poles, worth more than $250-million, are produced annually in the United States. Preservative treatment, of course, increases durability and enables them to render better service year in and year out, through all kinds of weather, for many years. The distribution and transmission lines into which these poles find their way represent an investment of many billions of dollars.

But how much do we know about the strength of poles of the different species now in use and the diameters that are necessary and economical for any given line? How much engineering data do we have to establish the proper pole size and pole spacing for a given kind of service? Is money being wasted by using poles that are larger and stronger than necessary, or are we using some poles in sizes that are too small for the job?

Unfortunately, we do not have adequate answers to these questions. They are particularly significant because of the importance of safety on the one hand and the importance of economy on the other. These and related questions have been considered by a special committee of the American Standards Association responsible for wood pole specifications, and by specialists of the American Society for Testing Materials. They came to the conclusion that much more information on the strength of full-size poles was needed, and that the only way this could be accomplished was by a large-scale research program supported by all of the interested parties—wood pole producers, treaters, and users.

Specifications to be Revised

The outcome is the present Wood Pole Research Program sponsored by the American Society for Testing Materials, with the actual testing work being done by the U. S. Forest Products Laboratory. The results of this program are expected to provide both a better basis for safe pole-line design and may effect utility and industry-wide savings amounting to as much as several million dollars a year. These results are to be used to revise the specifications and pole classes established by the American Standards Association and used in the National Electrical Safety Code and numerous State and other codes. In these specifications, pole classes are set up on the basis of minimum diameter or circumference requirements, so that all poles in the same class, regardless of length or species, will have the same strength under a horizontal load applied two feet from the top end, as in a transmission line. This research should be of vital interest in the rural electrification program.

There have been, over the years, very significant and extensive changes relating to the use of wood poles in communications and power-line service. No further back than the turn of the century, timber was still a very abundant commodity in the United States. In the economy of abundance there was little need or incentive to use wood economically, either for poles or for other purposes. Without adequate information on strength, it was easy to provide the necessary pole-line requirements by employing sizes that in many instances were larger than actually required. Species that were used included chestnut, northern white cedar, western red cedar, eastern white pine, and southern yellow pine.

Over the years there has been a significant change in the species used as our population and development spread westward. This change resulted both from the exhaustion of certain species, such as the chestnut devastation by blight, and from the need of employing additional species from the western forests as these timber resources were brought into use. Our principal pole species at present include western red cedar, southern yellow pine, Douglas fir, lodgepole pine, and western larch.

In the years ahead, we can expect that additional species will be brought into use. When the time comes, it will be particularly helpful to have some simple way of speci-

[1] Maintained at Madison, Wis., in cooperation with the University of Wisconsin.

A truckload of 55-foot Class 1 southern pine poles selected in the Kisatchie National Forest for testing at the Forest Products Laboratory in Madison under the ASTM Wood Pole Research Program.

fying their use, from present data on strength, without the need of conducting full-size pole tests.

Such a benefit could result from the present wood-pole research program, if the correlation between the inherent strength of the wood and the strength of poles can be established.

The less we know about a material, the greater the factor of safety that must be used in its application. This is in reality a "factor of ignorance" that may result in unnecessarily increased costs.

For some time, the pole-using organizations have appreciated that many of the presently recognized values for ultimate fiber stresses of the commercially-used wood pole species are not on an equitable basis and need to be critically reviewed. The problem is one not only of determining allowable fiber stresses for poles in the natural untreated condition, but also those for poles treated with wood preservatives.

Early National Electrical Safety Codes very inefficiently and conservatively used 5,000 pounds per square inch as the allowable fiber stress for all species. In the 1920's, the American Standards Association (ASA) developed for the first time standard specifications for the various species then in use and introduced class numbers in place of the lettering system. By that time some test data on pole strength had been accumulated for a few species, and these data were used to establish the allowable fiber stresses adopted at that time. Then the National Electrical Safety Code was adjusted to these values. When some additional species, such as lodgepole pine and Douglas fir, were introduced, and still later, when some of the miscellaneous conifers came into use, a more theoretical method of rating allowable fiber stresses was made because of lack of pole test data. This resulted in two inconsistent bases for rating the strength of poles, with wide discrepancies between them.

After World War II, ASA Committee 05 was reorganized and began to revise all the standards and to condense them into one standard specification. In this work, available pole test data were reviewed and found to be inconclusive. The strength of wood varies greatly with its moisture content, and one reason for the inconclusiveness of the pole tests was that the effect of seasoning on the strength of the poles was not adequately considered. It was obvious that more exact and conclusive test data were needed in order to establish a consistent basis for rating the strength of all species of poles, and to reduce materially the "ignorance factor."

Test Program Objectives

A brief description of the ASTM Wood Pole Research Program that was developed to meet these various problems was presented in the June 1954 issue of RURAL ELECTRIFICATION MAGAZINE. Broadly, the program, which has now been in progress for some two years, was developed to get answers to a number of questions of vital importance to wood pole producers, treaters, and users. The questions relate to the strength of poles of different species, factors affecting strength, simplified methods of establishing fiber stresses, methods of testing for strength, and need for revision of pole specifications.

The basic objectives of the program are:

1. To obtain reliable data on the strength of full-size poles of different species as economical size classes, design stresses, and specification requirements.
2. To determine the effects of preservative treatments upon the strength of poles.
3. To establish a correlation between the strength of small clear specimens and full-size poles to eliminate expensive tests on full-size poles.
4. To study the reliability of the machine and the crib methods of testing full-size poles, and to compare the results.

Expected results of the program are more precise information that will reduce the "ignorance factor" in pole design and pole safety, more accurate means of rating poles for strength, and a quicker, less costly method of establishing the actual strength of new species for poles, with anticipated annual savings to pole users amounting to many times the cost of the program.

The complete program includes southern yellow pine, western red cedar, lodgepole pine, Douglas fir, and western larch, and involves tests of some 600 full-size poles and over 15,000 small clear specimens.

Substantial progress has been made since the research was started two years ago. With the completion of the tests on untreated poles and the related reports, the work is about one-half completed. More specifically, the tests have been completed on untreated western larch, Douglas fir, western red cedar, lodgepole pine, and the four species of southern yellow pine to determine the strength of the several species and the relationship of pole strength to the inherent strength of the wood. In addition, a number of full-size

(*See POLE TESTING, page* 60)

McKay Resigning at Interior to Oppose Morse's Re-election

Morse Welcomes McKay's Entry In Senate Race—Issues Clear

Secretary of the Interior Douglas McKay announced last month he will resign to seek election to the seat now held by Sen. Wayne Morse (Oreg.) in the November elections.

Morse told newsmen that he "welcomed" McKay as his opponent. He said McKay's candidacy will provide the people with clear-cut issues regarding the Federal power program. Morse has voted favorably on rural electrification and related Federal power issues 92% of the time, according to NRECA voting records. He has voted unfavorably 2.8%.

McKay is well known in rural electric circles, where he has been under fire on several occasions. Resolutions were passed at several NRECA regional meetings last year demanding his resignation and asking Congress to investigate his administration of the Department of the Interior. McKay on occasion has lumped rural electric leaders with groups he calls "socialists."

The Secretary's announcement followed the unexpected death of Oregon Governor Paul Patterson, who had stated his intention to oppose Morse. Patterson died of a heart attack a few days after his announcement.

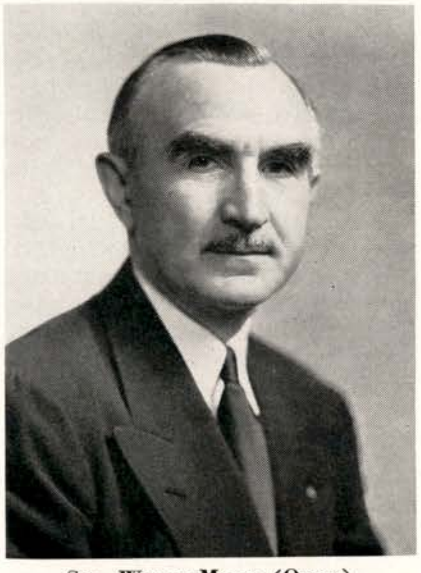
A question has been raised regarding the effective date of McKay's resignation. Initially, it was set for June 1, assuming he would have no primary opposition, but at least one candidate seeking to defeat Morse thinks he would be better than McKay. The Secretary must now resign earlier and go back to Oregon to campaign in the primaries.

Speculation on McKay's successor pointed to Under Secretary of Interior Clarence Davis, also Assistant Secretary of Interior Fred Aandahl, former Colorado Governor Dan Thornton and Washington Governor Arthur Langlie.

Davis will be remembered for his inference before a Senate Public Works Subcommittee that rural electric leaders were "stupid" for opposing the Missouri Basin marketing criteria. He has also called rural electric leaders "socialists."

Aandahl is presently under fire for attempting to increase Southwestern Power Administration rates 40%. He admits that he personally directed the rate increase. He is also well remembered for his attack on NRECA General Manager Clyde T. Ellis in his speech before the 1954 NRECA annual meeting in Miami, Fla. His attack on Ellis was repudiated by strong resolutions.

Secretary Douglas McKay



Sen. Wayne Morse (Oreg.)

The Portland *Oregonian* reported that Langlie visited President Eisenhower following McKay's resignation. Langlie described his visit as "nothing political." He has announced that he would not seek another gubernatorial term this fall. According to the *Oregonian,* it appears that he will oppose incumbent Senator Warren Magnuson (Wash.).

Other possible successors to McKay include former Congressman Wesley D'Ewart (Mont.), former Governor Len Jordon of Idaho, and REA Administrator Ancher Nelsen.

REA Reveals Results Of Five-Year Survey For New Facilities

REA Administrator Ancher Nelsen announced last month that the nation's rural electric systems will need $1-billion in the next five years to construct new and improve existing power facilities for farm consumers.

The $1-billion estimate is the result of a five-year survey recently completed by REA to determine the construction plans and the financial needs of borrowers from fiscal 1957 through 1961. The survey revealed that actually only $805-million would be spent for construction; allowing a margin for error, REA increased the total to $1-billion.

NRECA President Jack Smith, speaking at the 14th annual NRECA meeting in St. Louis, observed, "In 1949, an estimate of the future power requirements of REA borrowers through 1952, a period of only four years, was made. This estimate was so conservative that it missed its actual requirements by 8% to 14% each year. The error for the fourth year of the period totaled three billion kilowatt hours, or 14% under actual requirements."

Smith said that he did not quote his statistics to criticize anyone, but rather ". . . I quote them to show that I think all of us are in danger of being so conservative that we are not on sound ground. . . ."

Nelsen's summation of the five-year survey stated: "Experience indicates that the estimates for more distant years within such surveys are on the low side because of the difficulty of accurately forecasting requirements resulting from the accelerating use of electric power on the farm and the continuing migration of city dwellers to suburban and rural areas. A reasonable upward adjustment covering the five-year period in this survey would be 20%, indicating actual construction needs of about $1-billion."

Other findings of the survey included:

REA borrowers will apply for $617-million in loans for construction between 1957 and 1961, but applications might total $800-million during this period; power supply requirements will total 39% of expenditures; generation and transmission will account for 33% of future loans, and the electric loan program is at the highest peak since 1951.

4-H Fellowship Winners Visit NRECA Offices

The new NRECA motion picture served a dual purpose of entertaining and informing March 23, when NRECA was honored host to six former 4-H club members who were awarded fellowships for graduate study in Washington, D. C.

The visitors, all of whom had been active in extension work as county, home demonstration and 4-H club agents are pictured on RURAL ELECTRIFICATION MAGAZINE'S cover as they view "By the People, For the People —The Rural Electric Story" during their forenoon visit. They are (seated, left to right): Jane L. Merry, Rochester, N. Y.; Howard M. Willson, Glendive, Mont.; Doris McDaniel, Paoli, Okla.; George J. Broadwell, Brattleboro, Vt.; Dale Apel, Longton, Kans., and Willa E. Morava, Bridgeport, Nebr. NRECA staff member Lowell Endahl stands by the projector.

In addition to viewing the film, the visitors, during their half-day session with staff members, discussed various phases of NRECA activities and services and commented on the 4-H electric program and the part co-ops can play in its effectiveness. Several of them had worked closely with the program and expressed high praise for the assistance given them by their local rural electric cooperatives. The greatest need in the 4-H electric program, they said, is for more information and planned activities for 4-H members.

NRECA staff members were impressed with the keen awareness the group had for power problems and the overall program of the rural electrics as it applies to the consumer.

In their training program, the group included visits to the Rural Electrification Administration, the American Farm Bureau, Farm Credit Administration and International Cooperative Association, as well as several visits to the Capitol where they observed Congress in action. The training program is under the direction of the Division of Extension Research and Training of the Federal Extension Service. Under the provisions of the fellowships, recipients are required to devote about 50% of their time to study of Department of Agriculture and other governmental activities, 20% to academic work and 30% to a specific research problem in 4-H club work. All are working toward masters' degrees in education, five at the University of Maryland and one at American University.

Funds for two of the fellowships were provided by the National Committee on Boys and Girls Club Work of Chicago, and four by the Massey-Harris Company, Racine, Wis.

Adlai Lauds Electric Co-ops for "Miracles"

Presidential candidate Adlai Stevenson praised rural electric cooperatives last month as "20th century miracles in the best American tradition," and charged that rural electrification is "another instance" where the Eisenhower Administration has been "seeking to sabotage" a program vital to American agriculture.

"Probably no other single government-sponsored program has had such a beneficial effect on both farm life and the economy of the country as a whole," Stevenson observed. "The benefits of electric service have come to rural America and, in coming, have created a tremendous new market for American industry as well.

"But the job is not yet done," he cautioned. "According to the Federal Power Commission, the farmers in this region will increase their use of electricity over 100% between 1954 and 1980."

Stevenson asserted, "This means that the present REA systems must be heavied up in order to meet requirements for much larger loads. Our task is to make certain that the lending program of the rural electrification program is adequate. There must be sufficient loan funds and a fair interest rate."

Stevenson attacked the Eisenhower Administration power policies as

Adlai Stevenson

"seeking to sabotage a program vital to American agriculture." He said that President Eisenhower says he favors rural electrification, "yet in the 83rd Congress, 86% of his party in the Senate voted against an increase of $35-million in funds for REA's lending program."

The January 5 *Public Utilities Fortnightly* claimed Stevenson would continue pro-utility policies of the present Administration.

Excelsior! NRECA Building Moves Upward

The picture above shows the rapid progress being made on the new NRECA Building. Workmen are now finishing the second floor and erecting forms for the third floor concrete columns. Contributions to date total $50,053, leaving a balance of $6,037 yet to be raised to reach the objective of $56,090.

Tailored Wiring ---- A Cooperative Principle

By A. E. HALTERMAN

Manager
Pioneer Rural Electric Cooperative,
Piqua, Ohio

A co-op exists only for the benefit of its member consumers. Every effort, every thought, every rule, and every principle included in its operating practice should be designed to fulfill the wishes and needs of its members.

When service to members is slighted, primarily to assure a good financial statement, then the cooperative ceases to exist as a co-op and ultimately can pass out of the picture entirely.

Second only to continuous abundant electric service to the member's meter is a well-planned program to assist the member with his wiring problems. Gradually, over a 20-year span, our co-op has developed a plan for its members which we finally, in 1950, named "Tailored Wiring." It was designed to serve the member, and only the member, and to assure him a wiring system "tailored" to fit his present needs and those of the foreseeable future.

In the beginning, when 35 kwh per month was a normal bill, we required a minimum of a 60-amp entrance switch. Inspections of new wiring jobs before energizing always have been and still are required. However, more recently our wiring advisors have been trained to study a member's individual layout of buildings and electrical uses, and to plan with the member for the future. By reviewing the member's present electrical needs and recommending possible future uses that will effect greater savings, less labor, and more convenience and enjoyment, the advisor is able to "tailor" a wiring system that is basically correct both now and for the future. A properly tailored job can be expanded for the future with a minimum cost by making use of much of the present installations.

Our men map the farmstead using measurements and determine possible loads and then design the system, starting with present conditions and adding for anticipated future growth. Wire sizes, fusing, entrance switches, branch switches, central yard meter poles, voltages and all necessary components are figured and checked with engineering standards and furnished to the member. The minimum standards of the code are respected but in most cases the planned system is above the code standards.

We do not force the member to improve his system; we teach him the benefits of tailored wiring through demonstrations, newsletter information, publicity, and by lots of personal visits. In 1955, over 1,000 of our 6,000 members voluntarily cooperated in our tailored wiring program. As a result, we are able to get to the bottom of each and every question or complaint. Each complaint is systematically processed. The cause for such complaints as bad meters, low voltage, high bills, and television trouble are first checked by looking to and correcting the co-op's facilities and then turning to the member's facilities. This inevitably results in a wiring problem which we proceed to solve by applying the tailored wiring system. Over 75% of our complaints are settled in this way.

We insist upon inspecting each new wiring job and leaving with the member a detailed report of exactly what has been installed by the contractor. This is done preferably before the contractor has been paid. The reports are kept on file for future reference and for the protection of the advisor or inspector.

Old wiring jobs are reinspected only after the member signs a release

(*See WIRING, page* 61)

Harold Darst, co-op "Tailored Wiring" advisor, explains "fusing" to a class of vocational agricultural students with the aid of one of the six panels on fundamentals of wiring principles from the Ohio statewide demonstration trailer.

UNDER THE CAPITOL DOME

THE controversial Upper Colorado River project has been the only major legislative success thus far in the second session of the 84th Congress. Legislation supported by rural electric leaders that still awaits Congressional action includes: the Hells Canyon project, the Niagara River project, TVA's self-financing bill, Sen. Albert Gore's (Tenn.) bill to authorize construction of six Federal atomic power plants, the investigation of corrupt lobbying practices as revealed in the Natural Gas Act lobbying, and the Fryingpan-Arkansas project. (See story page 19).

Rural electric leaders will also push for remedial legislation to correct inconsistencies in the Administration's method of allocating costs to the various purposes of Federal multi-purpose natural resource development projects. The inconsistencies were revealed during the investigation of the proposed 40% SPA rate increase. (See story page 13).

Rep. Lee Metcalfe (Mont.) is greeted by Rep. Carl Vinson (Ga.), at left, previous to Metcalfe's SAGE testimony before the House Armed Services Committee which Vinson chairmans. Vinson had agreed to hear Metcalfe following the Montana Congressman's charge on the House floor that rural electric and telephone co-ops were being excluded from the SAGE project.

Metcalfe Wins for Co-ops

Attempts by the U. S. Air Force and the American Telephone and Telegraph Company to block rural telephone co-ops' participation in the SAGE project, to the extent of duplicating co-op facilities with Federal subsidy, was stopped last month almost single-handed by Rep. Lee Metcalfe (Mont.).

Rural electrics' participation in SAGE, however, still remains a question. Metcalfe promised to devote efforts to insure rural electric co-op participation in the project, following his successful fight for the rural telephone co-ops. A new battle may be in the offing.

The unusual incident occurred when Metcalfe appeared before the House Armed Services Committee to protest the Air Force's treatment of the Sheridan County Rural Electric Cooperative at Medicine Lake, Mont., and the Mid Rivers Telephone Co-op at Circle, Mont. The two co-ops desired to participate in the SAGE program but were given a run-around by the Air Force, according to Metcalfe.

(SAGE—Semi-Automatic Ground Environment—is a $3.5-billion nation-wide electronic communications system for national security in the event of an attack by an aggressor. The Air Force is using existing facilities where available and constructing new ones where necessary.)

As a result, Committee Chairman Carl Vinson (Ga.) ordered Major General Gordon Blake, director of communications — electronic (SAGE), to amend its requested language to authorize SAGE so that all existing franchise holders, cooperative-owned specifically included, are provided with an equal opportunity to participate in the SAGE program.

The amendatory language to the SAGE authorization stated: "In procuring such services (relative to SAGE), the Secretary of the Air Force shall utilize to the fullest extent the facilities and capabilities of communication common carriers, including cooperatives, within their respective service areas."

This was strengthened in the House Armed Services Committee's favorable report of the authorization. The report stated: ". . . in the procurement of communication, common carriers, including cooperatives, shall be afforded an opportunity to participate in the furnishing of such services within their respective service areas. The Air Force is required to utilize to the fullest extent the available facilities and capabilities of such carriers rather than procure the construction of parallel lines which might duplicate such facilities or capabilities. Thus only in the event that a carrier is unwilling or unable to furnish required service within its service areas shall another carrier be requested to provide such service."

The SAGE project has been under fire for some time. House Majority Leader John McCormack (Mass.) and Metcalfe have personally investigated the program since last July. Both have charged that it is fat with monopoly and subsidy. They have been supported by Sen. William Langer (N. Dak.) and Senators Mike Mansfield and James Murray (Mont.) The U. S. Comptroller General has ruled that the entire program was illegal because it had never been presented to or authorized by Congress.

Metcalfe presented evidence to the House Armed Services Committee that the Air Force refused to deal with rural electric and telephone co-ops.

Sheridan County Rural Electric, Metcalfe told the Committee, was asked to serve as a "gap filler" for SAGE in northern Montana. Sheridan had a line within one mile of the

SAGE installation. Subsequently, the Air Force negotiated with the Montana-Dakota Utility Company, and awarded them the contract. Evidence indicated that the Air Force had taken the bid of Sheridan, and asked Montana-Dakota to quote a better bid, co-op officials concluded.

Sheridan Rural Electric submitted another bid to the Air Force, previous to approval of the MDU contract. The co-op bid was $3,000 less. The Air Force, nonetheless, turned down the rural electric's bid on the grounds that "accepting successive bids" was unrealistic.

In the case of the Mid Rivers Telephone Co-op, the Air Force received a proposal from Mid Rivers, offering the co-op system for use in the SAGE program.

The Air Force declined to accept, and instead forwarded the offer to AT&T on the grounds that AT&T was the "prime contractor," and it was AT&T that should act on the proposal.

Metcalfe told the Committee that the Air Force was subsidizing the duplication of facilities in rural telephone and electric co-ops service areas under the guise of national defense. He predicted that the Federal subsidies would put AT&T telephone subsidiaries and power companies in a position to destroy rural electric and telephone co-ops, if continued.

REA Increases Urged

NRECA's Legislative Committee, meeting here last month to testify before the House Agriculture Appropriations Subcommittee, supported a $249,723,431 loan program for REA in 1957, as compared to the $210,023,431 in the President's budget request.

The total electric loan program being requested by the rural electric leaders includes $185-million in new funds and a loanable contingency fund of $25-million. Added to this will be $35,223,431 in funds carried over from the current fiscal year and $4,500,000 of loan funds rescinded in previous years.

The President requested that Congress make $145,300,000 available in new funds, along with the same carry-over funds and loans rescinded in previous years.

Clark McWhorter, chairman of the NRECA Legislative Committee, reported the need for $100-million in new funds for the fiscal 1957 telephone program. This amount, added to $29,556,176 in carry-over funds from the current fiscal year and $1-million in loan funds rescinded in previous years, would make $130,556,176 available for the telephone loan program.

NRECA's Legislative Committee met in Washington last month to testify before the House Appropriation Subcommittee on REA loan funds for fiscal 1957. Above, the Committee studies the loan fund figures resulting from NRECA's annual survey. Members of the Committee and NRECA staff pictured include: Clyde Ellis, NRECA general manager; Oliver Rose, South Dakota; J. A. Anderson, Colorado; E. A. Johnson, Oregon; Floyd Jones, Tennessee; Leo Forrest, Texas; Leon Miller, Michigan, and Richard Dell, NRECA legislative assistant.

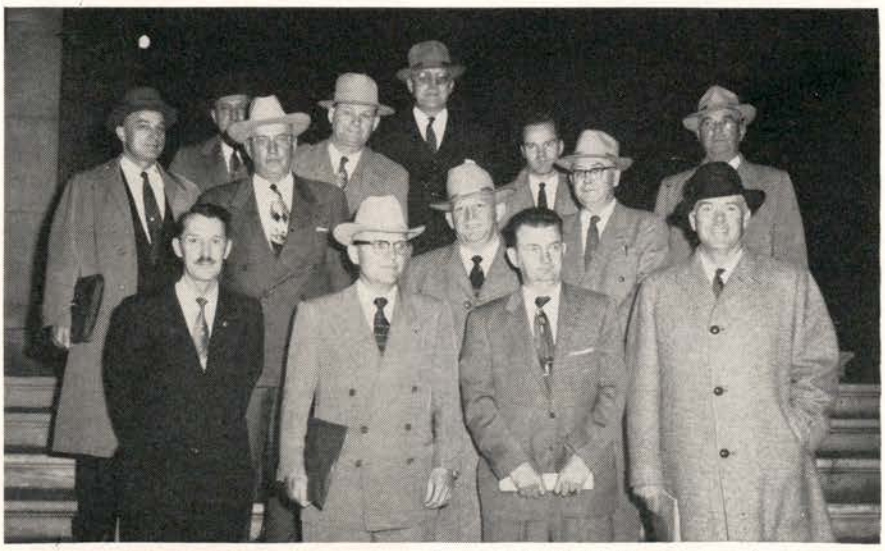
The President's budget message requested $49,500,000 in new telephone funds for fiscal 1957. The carry-over fund and loan funds rescinded would be added to this, making a total of $80,056,176 that would be available for the telephone program.

In administrative funds for REA, the Legislative Committee asked that Congress make $8,850,000 available, as compared to the Administration's request of $8,700,000. Part of the funds requested, the Legislative Committee said, should be used by REA in studying the application of atomic energy in the generation of electric power for rural areas.

The NRECA Committee also said that $401,275 should be earmarked for farm electrification research.

Charges that certain bills introduced by Rep. Marguerite Church (Ill.) would destroy REA, as recommended by the Hoover Commission, were recalled by Leo Forrest, manager of Deaf Smith County Electric Co-op, Hereford, Tex., also a member of NRECA's Legislative Committee. Similar bills have been introduced by Senators Joseph McCarthy (Wis.), John Williams (Del.) and Alexander Smith (N. J.).

Forrest said the Church bills would



It was late at night before the members of NRECA's Legislative Committee finished giving their testimony before the House Agriculture Appropriations Subcommittee last month. In their testimony the rural electric leaders asked for $185-million in new loan funds and a loanable contingency fund of $25-million for fiscal 1957.

unnecessarily compel REA to charge borrowers "service charges" for processing loans at a rate sufficient to cover all of REA's operations expenses. Additionally, REA's present 2% interest rate would be doubled or tripled, he declared.

In the field of atomic energy, Clyde Ellis, NRECA general manager, presented information on rural electrics having difficulties in getting help from the AEC in the field of atomic power. He proposed that REA should move in and help the electric co-ops. Ellis said that Congress should give REA a financial boost so that they could move out and help the co-ops in the atomic energy field.

Since the government is already subsidizing private industry atomic reactors with direct cash grants and rapid tax amortization subsidies, Ellis pointed out, there is no reason why rural electrics shouldn't receive help of the same sort, and share in the benefits that can be reaped from atom-generated power.

Supporting Ellis' statements that rural electrics need technical help, Alex Hudgins, executive secretary of the Virginia Association of Electric Co-ops, said that REA has nine men cleared for confidential atomic energy information, but that only one man now actually works full time in the atomic power program.

Hells Canyon Endorsed

The Citizens Committee on Natural Resources, headed by Dr. Ira N. Gabrielson, noted conservation authority, has asked the Eisenhower Administration to "reappraise" its plan to turn the vast potential of Hells Canyon over to the Idaho Power Company for partial development.

Senator Richard Neuberger (Oreg.) spoke for the conservationist committee backing Federal development of the nation's best hydro-electric site. He called the conservationists' announcement "an epochal turning point" in the long struggle for a high Hells Canyon dam.

According to Dr. Gabrielson, preservation of the fish and wildlife sites endangered by the construction of flood control dams on the Clearwater and Salmon Rivers, made necessary by Idaho Power's partial plan for flood control on the Snake River rather than public power, is the reason the Citizens Committee is taking a stand.

Idaho Power's plan for two small dams lacks sufficient storage for flood control. To provide the necessary storage the Administration has requested "partnership" authorization for Bruce's Eddy and Penny Cliffs on the Clearwater River. Pacific Northwest Power Company, a multi-million dollar syndicate of four area power companies, has filed preliminary permits with the Federal Power Commission for both Bruce's Eddy and Penny

Ira Gabrielson

Cliffs. So far the Administration has made no mention of a dam on the Salmon River.

These dams, the Citizens Committee said, would destroy the salmon spawning grounds and thus would have a disastrous effect on fish and wildlife and the important salmon industry.

Atomic Power Opposed

The Atomic Energy Commission is opposed to any large-scale spending of government funds for the construction of full-scale atomic power installations, Chairman Lewis Strauss testified last month before the Joint Committee on Atomic Energy.

A "citizens panel," headed by Robert McKinney, Santa Fe, N. Mex., publisher, had recommended earlier that "the Commission should support a program to bring atomic power to a point where it can be used effectively and widely on a competitive basis, even to the construction with public funds of one full-scale 'demonstration' plant of each major reactor size and type."

AEC's 67-page reply to the McKinney Report said that such action would be "premature" at this time. The AEC reply suggested, instead, that government funds could be most profitably employed in research and development.

Commissioner Thomas Murray, who favors greater government participation, dissented from the majority report commenting that it is a question of "how soon do you want to get the job done?" Murray's philosophy on atomic energy is endorsed by rural electric leaders. The commissioner followed NRECA General Manager Clyde T. Ellis before the Joint Committee recently and expressed views nearly identical to Ellis'. Both men charged that there is no actual program for developing atomic power in the nation, and that one can't exist until the government constructs pilot power reactors.

Strauss said that government funds should be used to construct full size plants only if these plants would contribute "measurably" to the AEC goals, and if private funds were not available. He did not indicate what the AEC goals were.

When Chairman Lewis Strauss (center) and other members of the Atomic Energy Commission (below) appeared before the Joint Committee on Atomic Energy last month, most of their testimony dealt with the findings of the McKinney Committee on the impact of peaceful uses of atomic energy. On Strauss' right is K. E. Fields, general manager of AEC, and on his left, Dr. W. F. Libby, one of the four AEC commissioners.

LEGISLATIVE BOX SCORE

Copies of bills listed below or correspondence concerning them may be requested from your Senator, Senate Office Building, Washington 25, D. C., or your Representative, House Office Building, Washington 25, D. C.

Bill	Senate	House	White House
REA			
Government Operations—H.R. 7032, H.R. 7382, by Rep. Hoffman (Mich.)—See March issue of RURAL ELECTRIFICATION MAGAZINE.		In Committee	
To Make REA Subject to the Govt. Corp. Cont. Act.—S. 2230 by Sen. Williams (Del.), S. 2466 by Sen. McCarthy (Wis.), H.R. 7343 by Rep. Church (Ill.)—See March issue.	In Committee	In Committee	
Loans by Agencies of the U.S.—S. 2532 by Sen. McCarthy (Wis.), H.R. 7357 by Rep. Church (Ill.)—See March issue.	In Committee	In Committee	
Interest on Loans and Advances Payable by the Govt.—S. 2533 by Sen. McCarthy (Wis.), H.R. 7359 by Rep. Church (Ill.)—See March issue.	In Committee	In Committee	
To Authorize REA to Borrow Money—S. 3327 by Sen. Smith (N.J.) and H.R. 8243 by Rep. Church (Ill.)—See March issue.	In Committee	In Committee	
Agencies Engaged in Lending Operations—H.R. 8242 by Rep. Church (Ill.)—See March issue.		In Committee	
RIVER & VALLEY DEVELOPMENT			
Hells Canyon—S. 1333 by Sen. Morse (Oreg.), H.R. 4648 by Rep. Pfost (Ida.)—See March issue.	In Committee	In Committee	
To Amend the TVA Act—S. 2373 by Sen. Kerr (Okla.), H.R. 6770 by Rep. Buckley (N.Y.), H.R. 6575 by Rep. Davis (Tenn.) and H.R. 6576 by Rep. Jones (Ala.)—See March issue.	In Committee	In Committee	
Colorado River Storage Project—S. 500 by Sen. Anderson (N. Mex.) and H.R. 3383 by Rep. Aspinall (Colo.)—A bill to authorize the Secy. of the Interior to construct, operate and maintain the Colorado River Storage Project and participating projects, and for other purposes. Committee on Interior and Insular Affairs.	In Conference	In Conference	
Fryingpan-Arkansas Project—S. 300 by Sen. Millikin (Colo.), H.R. 412 by Rep. Chenoweth (Colo.)—See March issue.	On Calendar	On Calendar	
John Day Project—H.R. 5789 by Rep. Coon (Oreg.)—See March issue.		In Committee	
Niagara River—S. 1823 by Sen. Lehman (N.Y.), H.R. 5706 by Rep. Buckley (N.Y.), H.R 5878 by Rep. Davidson (N.Y.)—See March issue.	On Calendar	In Committee	
OTHER			
Small Projects—S. 2442 by Sen. Anderson (N. Mex.), and H.R. 5881 by Rep. Engle (Calif.)—See March issue.	In Conference	In Conference	
Payments for Hydro-Electric Power Benefits—S. 1574 by Sen. Goldwater (Ariz.)—See March issue.	In Committee		
Low-Cost Electric Energy—S. 2643 by Sen. Potter (Mich.), H.R. 7258 by Rep. Thompson (Mich.), H.R. 7554 by Rep. Hayworth (Mich.) and H.R. 6294 by Rep. Dodd (Conn.)—See March issue.	In Committee	In Committee	
Special Counsel for the U.S. in Dixon-Yates Suit—H.J. RES. 465 by Rep. Price (Ill.), H.J. RES. 463 by Rep. Holifield (Calif.) and S.J. RES. 112 by Sen. Kefauver (Tenn.)—See March issue.	In Committee	In Committee	
Taxation—H.R. 7882 by Rep. Davis (Tenn.)—See March issue.		In Committee	
Atomic Energy Commission—S. 2725 by Sen. Gore (Tenn.)—See March issue.	In Committee		
Atomic Energy Commission—H.R. 1777 by Rep. Cole (N.Y.)—See March issue.		In Committee	
Atomic Energy for Utility Service Requirements—S. 3148 by Sen. Anderson (N. Mex.) and H.R. 9076 by Rep. Cole (N.Y.)—See March issue.	In Committee	In Committee	
Electric Power Rates—S. 3338 by Sen. Kerr (Okla.), H.R. 9664 by Rep. Trimble (Ark.), H.R. 9721 by Rep. Albert (Okla.). To prohibit rate increases for a period of 18 months to public bodies and cooperatives for electric power generated at Federal projects.	In Committee	In Committee	

This is National Water Systems Month

PLENTY OF WATER • PLENTY OF PRESSURE

Water Systems Month

To Boost Pump and Power Sales

By JOHN HOSFORD

Executive Secretary, National Association, Domestic and Farm Pump Manufacturers

BECAUSE of the close relationship between running water under pressure and line load building, rural electric cooperatives will benefit from a strong promotional tie-in with the eighth National Water Systems Month in May.

Statistics show that power use is quadrupled in the average rural home once an electric water system is installed. The extra power is required to operate electric water heaters, clothes washer, dishwashers, food waste disposers, and various smaller electrically-operated plumbing-connected appliances.

For this reason, the electric water system should be considered the heart of any power use program.

Manufacturers this year are more active than ever before in promoting water systems sales through their own organizations right down to the dealer level.

National Water Systems Month initially enlisted the support of 30,000 dealers in the plumbing, well drilling, electrical merchandising, hardware, and farm equipment retailing fields.

Last year, dealer participation had been doubled. This year, with the eighth National Water Systems Month coming up in May, the response is expected to be still greater, proof enough of the potency of this annual, intensive promotional period for selling the benefits of running water to families living in rural areas.

The potential market is tremendous—more than 1,300,000 installations. Initial farm installations alone should account for at least a quarter of a million sales. With a minimum of 1,200,000 new housing starts predicted for 1956, one out of five, or upwards of 250,000 will be made in beyond - the - water - mains suburban areas. Each of these will also require an electric water system.

There are another 100,000 prospects among non-farm rural homeowners presently lacking a running water system.

Commercial installations (motels, highway restaurants, filling stations, miscellaneous small manufacturing plants, summer camps) should account for another 50,000 sales.

It is estimated that as many as 260,000 new water systems will be installed to replace obsolete, worn-out equipment or water systems which have become inadequate because of the great increase in water needs since they were installed.

Supplementary systems to provide for irrigation give more adequate fire protection, and meet increased water requirements of upwards of half a million families.

In addition to the joint efforts of pump manufacturers, power suppliers, and appliance manufacturers whose market in rural areas depends on running water under pressure, a further stimulus to water systems sales is coming from the related nationwide promotional programs of ACTION and Operation Home Improvement, this being National Home Improvement Year.

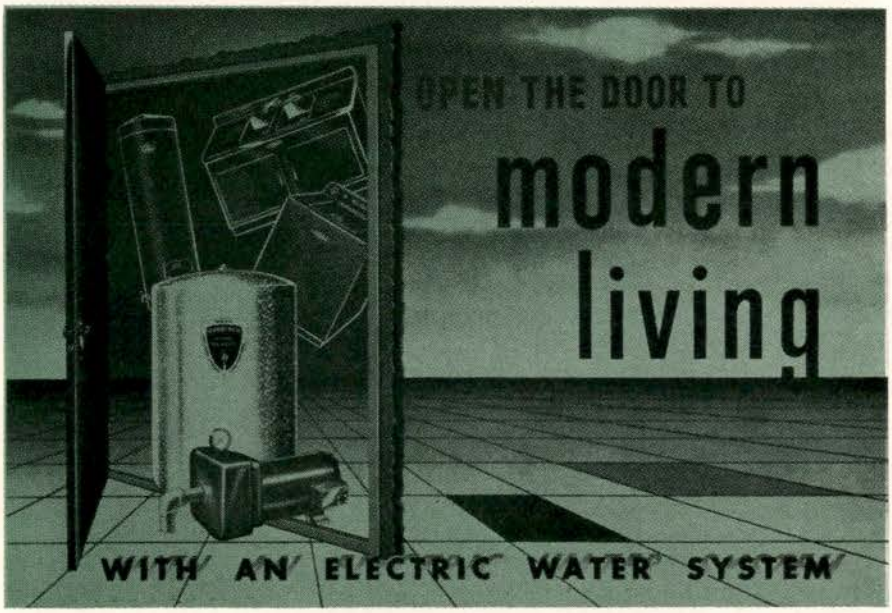
This is the year to fix, to gear the home for better living. This is the essence of Operation Home Improvement, a potent reinforcement of the message of National Water Systems Month, that modern living beyond the water mains begins with plenty of running water under pressure.

Rural electric systems will want to do everything possible to help pump dealers organize for aggressive selling in May. Cooperative advertising can go a long way towards realizing this objective, as well as incentive contests, with prizes for dealers who sell the most pumps in May.

May advertising schedules—newspaper, radio and TV spot, direct mail — should emphasize National Water Systems Month and running

(*See WATER SYSTEMS, page* 52)

Hard hitting display materials such as this poster will appeal to the rural market and emphasize that the water system opens the door to modern living.



Santee-Cooper and Jefferies Given Clean Bill by Majority of Investigating Group

Minority Reports Authority Solvent, but Hits Jefferies

The South Carolina Legislature's nine-member committee investigating the Santee-Cooper Power Authority reported the Authority to be solvent, and also the majority report absolved Manager R. M. Jefferies of the Authority's financial difficulties.

While both the majority and the minority group reports agreed that Santee - Cooper was financially solvent, disagreement occurred as to why Santee-Cooper had suffered financial difficulties.

The majority report contributed to the following factors: A five-year drought; a $1.3-million overrun on construction of a $16½-million steam plant; a $350,000 overrun on a $950,000 office building; approximately $250,000 damages done by Hurricane Hazel in 1954; increased operating expenses of approximately $2-million; increased interest and principal in connection with Santee-Cooper's financing.

The minority report stated:

"The financial difficulty is a condition which developed over the past several years. We attribute this difficulty, among other things . . . to management. By management, we mean the general manager (Jefferies) who is an employee, and we mean the board of directors who have full responsibility under the law to manage the property and business of the Authority."

Neither the majority nor the minority report made reference to the study report of Wesley Edgar, a certified accountant, formerly with the South Carolina Gas & Electric Company. Edgar's study made a political attack on Santee-Cooper and Jefferies, but was apparently given no credence by either the majority or the minority. Edgar's expenses for his study have raised a controversy. He contracted to do the study for $1,500. Subsequently, he submitted a bill for $4,000.

Both the majority and the minority criticized Santee - Cooper's contract with Central Electric Cooperative, a federated transmission co-op, distributing Santee Cooper power.

E. V. Lewis, manager of Central Electric, explained the co-op's contract with Santee-Cooper during the investigation that began last fall.

He said that before Central constructed its transmission system, which includes 35 of 46 counties in South Carolina, Santee-Cooper had to dump its power at a very low price, and the only ones who could use it were the power companies in the state.

In 1947, Lewis revealed, Santee-Cooper was forced to dump approximately 146-million kwh to power companies at low rates, whereas Central was paying 6.4 mills per kwh in addition to providing a transmission system.

Since construction of Central's transmission system, power is now delivered to cities, towns and industries, benefiting many instead of just the power companies, thus complying with the law that created Santee-Cooper.

New York Assembly Defeats Referendum

An attempt by five western New York companies to grab the Niagara power site, by throwing it into the political arena this fall through a referendum, was defeated by Republican party leaders, according to the *New York Times.*

Top Republican leaders lined up opposition to the bill, which would place a Niagara referendum on the November election ballot, to avoid any possibility of the GOP being termed a tool of the power companies' interests.

An unofficial poll of the GOP members of the state assembly, according to the *Times,* revealed 60 of the 90 members were opposed to the referendum. One day earlier, sponsors of the legislation claimed they had a minimum of 80 or 90 Republican votes in the assembly. Fifty-nine Democratic members were solidly opposed to the referendum.

National rural electric leaders have strongly opposed "giving away" the vast hydro-electric power potential of the Niagara River to the five power companies. They have endorsed legislation sponsored by Senator Herbert Lehman (N. Y.) and Rep. Irwin Davidson (N. Y.), which calls for development by the State Power Authority and Federal-type preference provisions for marketing all the power. The bill is also endorsed by Governor Averell Harriman.

In the 83rd Congress the House passed a bill that turned the Niagara site over to the five western New York power companies. However, the bill ran into opposition in the Senate and was never passed.

The Lehman-Davidson bill has been voted favorably out of the Senate Public Works Committee and is awaiting action on the Senate floor.

Virginia Sell-Out To Vepco Defeated

Citizens of Harrisonburg, Va., last month defeated a sell-out proposal for their 50-year-old municipal electric system submitted by the Virginia Electric Power Company.

Interference by Vepco in the local election was rated a decisive factor in the defeat of the sale, a citizens committee reported. Vepco had about 35 of its employees knocking on doors late in the campaign.

This is similar to the tactics employed by Washington Water Power Company in the Stevens County rural electric sell-out in the State of Washington.

In the Virginia municipality, voters organized a Citizens Committee to Save the Electric System.

The committee's work stopped the sale. In one of its own ads, it was stated: "For more than 50 years the electric system has been a source of pride and profit to the citizens of Harrisonburg. . . . And if we sell out to Vepco, we lose forever what our forebears built up for future generations."

One of the biggest selling points of the pro-municipality committee was a petition calling for rehabilitation and reorganization of the system, if the sale plan was defeated. The committee set up a four-point plan that proposed the immediate correction of voltage variances and other pressing deficiencies, also the employment of a full time electrical engineer to superintend the proposed rehabilitation.

Two other points were prompt adoption of such municipal ordinances to assure operation of the system on a sound business basis, and the establishment of a separate municipal commission or authority that would be charged with the overall supervision of the system.

Another point that the Committee stressed was local control, pointing out that ten of the leading stockholders of Vepco were located in Wall Street in New York and other Eastern financial districts.

Montana Leaders Praise NRECA Management Institute Meeting

This is a partial view of the directors and managers who met in Lewistown, Mont., for the Management Institute I-B meeting. The institutes are designed to keep rural electric systems current with modern management techniques and methods. Actual case problems are presented to the directors and managers and they are asked to solve them, using the new techniques and methods they have learned from the Institutes.

More than 40 directors and managers representing 15 of Montana's rural electric co-ops hailed the Management Institute I-B meeting in Lewistown, Mont., as outstanding last month.

One of the main topics discussed with a great deal of interest was the recent propaganda attack by Montana Power Company against the "preference clause." The power company has been using paid advertisements to attack the co-ops' preference rights.

Other topics discussed by the directors and managers included the responsibilities of rural electric managers and directors; major functions of boards in current and future planning; board responsibilities in salary and wage administration; salary practices in rural electric systems, and actual case histories of various problems.

While the directors and managers were in Lewistown they conferred with President George Lackman and the board of the Montana State Association of Rural Electric Co-ops on final plans for the 1956 annual statewide meeting which will be held in Lewistown on October 30-31.

Two more Management Institutes sponsored by NRECA in conjunction with the New York management firm of Rogers, Slade & Hill, will be offered in Montana this year, according to Robert I. Kabat, NRECA's management assistant, who is in charge of arranging the Institutes.

At the recent Management Institute meeting in Lewistown, Mont., George Lackman (left), president of the Montana State Association of Rural Electric Co-ops got together with the two "professors" of the Institute, R. L. Dieffenbacher (center), management engineer of New York, and Robert I. Kabat (right), management assistant of the NRECA staff.

Arizona Co-op Put Under Regulation

The Arizona State Corporation Commission has agreed to assume jurisdiction over the Trico Electric Cooperative at Tucson, Ariz., shattering a state precedent. However, curbs were installed on the co-op's growth.

Two Arizona power companies, Tucson Gas, Electric Light & Power Company, and Citizens Utilities, Inc., objected to the Corporation Commission's action, brought by a group of Trico consumers who asked the agency to regulate the co-op's rates. The co-op rate schedule was approved.

The two power companies objected to the State Commission's action on the grounds that it would allow Trico to compete for the power company's customers. They asked the commission to assure them that Trico would not be able to provide competition.

The commission complied by prohibiting the cooperative from:

—Constructing duplicating facilities without the permission of the two power companies.

—Serving any consumer within one-half mile of the lines of the two power companies, if they had been installed before Trico offered its services.

The commission said that in cases where Trico and the two power companies became deadlocked, they would be judge.

The commission, however, put no limit on Trico's expansion within its own territory, which includes the sparsely populated rural areas that the power companies consider uneconomical to serve.

THE PRESIDENT'S COLUMN

By J. E. SMITH
NRECA President

"An informed membership is a good membership." We hear that expression so often, and I am sure that we not only agree that it's true, but we can all cite examples that will verify it.

We managers and directors would give anything if we could get the members of our systems to pay more attention to the information we try to give them. We spend a lot of time on newsletters, membership meetings, and various other activities for the primary purpose of informing our membership on those subjects that are so vital to success of the rural electric cooperative. Too many of our members are disinterested and never really understand or care about the business of the cooperative.

I think we are all aware of the serious situations that can result from such indifference. The sell-out of Stevens County PUD is a prime example. Without an informed membership any rural electric cooperative might well be faced with an identical end.

How to keep an informed membership is a major problem—one with which we must all be concerned and one which requires all our effort. But the problem is not all at the local co-op level.

What about your federated generation and transmission co-ops, your statewide associations and your National Association? Have you ever considered the possibility of their failing for that same reason—indifference on the part of those who should know why and how these organizations work?

I've been somewhat concerned recently about reports that indicate a certain degree of lethargy on the part of co-op board members toward the activities and services of their National Association. For example we hear reports that directors of local systems did not know NRECA has produced a motion picture. Some have no idea of the value of management institutes, or of the reason for legislative activities. Others misunderstand the purposes of our dealer and other power use programs.

The cornerstone for the new NRECA headquarters building will be laid in May. This will not only be a fitting monument to rural electrification, but it will help increase the efficiency of the NRECA operation. However, we can't help wondering if local boards of directors can be really enthusiastic about the need for this new building if they have only a very sketchy idea of how the work done in that new building will be of direct benefit to their systems.

Perhaps these board members are not being given a clear picture of the reasons they should continue to support their National Association in years to come.

We as managers must make a determined effort to keep up-to-date and fully informed and to see that all the possible information and discussion is had by our directors. That applies to all the local, state and national events and policies which are so vitally important in the rural electrification program.

The enduring existence of the electric co-op, it seems to me, depends on our local boards providing voluntary, aggressive support for policies, and an active desire to expand their own members' understanding and belief in not only the local co-op's policies but the policies of the state and other organizations to which it contributes funds or support.

EDITORIALS

Congressional Inaction

As pointed out elsewhere in this issue, there has been an alarming lack of action on power and other legislation affecting the rural electrification program in Congress this year. Whereas the second session of the 84th Congress started with high hopes for constructive legislation on hydro power, atomic energy and remedial bills to protect the interests of cooperatives, it now appears that nothing the rural electrics are interested in except appropriations bills may be sent to the President for signature. In part, the stalemate in new legislation is attributed to the failure of some Congressmen to support projects outside their own state, while asking their colleagues to expedite their own area's development.

At this writing it appears that even the Fryingpan-Arkansas river basin development bills may not be enacted during this session, despite the Administration's approval and priority treatment. Ardent backers of Fryingpan-Arkansas are blocking the Hells Canyon bills, and it appears that unless they are willing to allow Hells Canyon to come up for consideration, their own pet project may never emerge from the same committees.

Hells Canyon, of course, will produce benefits many times the potential of Fryingpan-Arkansas for rural electric systems. The effect of tying up the Hells Canyon legislation in committee while supporting Fryingpan-Arkansas is to "toss a crumb" in the direction of rural electrification while refusing to allow consideration for the pressing needs of the power-starved Pacific Northwest.

On other fronts—atomic energy, Niagara development, the six-year stalemate at Clark Hill, and TVA self-financing—there hasn't been a whisper of promise for Congressional action. Yet these bills were all expected to have active backing this year.

This may go down as one of the most disappointing of Congressional sessions for rural electrification in the history of the program.

Sage Demonstration

The discrimination shown by the Army against the nation's rural electric and telephone co-ops, and other small utilities, in providing for the nation's defense again shows the utter necessity for rural electric and telephone systems to maintain strong, aggressive national organizations.

As recounted elsewhere in this issue, only a staunch battle by Rep. Lee Metcalfe (Mont.) has stalled the Army's effort to hand over the $2½-billion communication warning system to the biggest monopoly in the country, denying small utilities such as cooperatives the right to participate in the five-year project. By considering the Bell System and commercial power companies as "prime contractors" regardless of the location of observer posts in the cooperative service areas, the Army has, perhaps unwittingly, placed a shotgun at the head of the electric and telephone co-ops. It is an invitation for the large utilities to invade the cooperative territories, with a view to chopping them up, or at the very least to force the cooperative utilities to donate the use of their facilities at

the price the Bell System or power companies dictate.

The $2½-billion boondoggle for the monopoly utilities would probably have gone through without a murmur had the electric and telephone co-ops not maintained an alert, effective nationwide organization. It is simply common sense that no business can protect its interests if it can't keep a sharp eye on administrative as well as legislative branches of government. As a pair of University of Illinois professors have pointed out, the Federal government has the ability, through its spending power, to strengthen monopoly or keep it in check. The cooperatives are doing their best to maintain a strong competitive economic system through action such as they've taken on the SAGE project.

New Institute Values

Now in its third year, the NRECA program of Management Institutes continues to grow in proportion to the enthusiastic response of member systems.

In June, a series of two completely new three-day Institutes will be initiated (see Calendar of Meetings). These new programs, labeled Institutes III and IV, are designed to be of particular interest to such key employees as the assistant manager, electrification advisor, engineer, office manager, and superintendent, in addition to the manager. There is no duplication of material offered during the previous years at the NRECA Management Institutes, representing genuine expansion of the service.

Formerly the Institutes have been directed mainly toward managers and directors. Now, broadening the base of participation by key employees, as well as managers, will tend to strengthen the total co-op management team. and make it much easier to carry out the techniques and philosophies taught at the Institutes.

Briefly, Institute II will focus attention on leadership, motivation and human relations, while Institute IV will dwell on consultative management and communications. Managers having problems in any of the following areas can benefit greatly from the brand new Institute III: getting results through others, issuing instructions, handling grievances and complaints, correcting mistakes, administration of discipline, providing recognition and appreciation, building public support, keeping members satisfied and motivating high productive efforts.

Institute IV will include discussions on such useful techniques as how to encourage group thinking, feeling and action; how to practice group problem solving; putting consultative management to work, how to maintain adequate communications with the board, members, employers, membership and the public, and how to develop effective personnel policies.

These real down-to-earth "how to do it" sessions can be most beneficial to all rural electric systems. There will be many actual practice sessions. To cut travel time and costs and to afford the opportunity to acquire the material more quickly so that it can be applied immediately, both the new series of Institutes are being scheduled in successive combinations. Managers are encouraged to attend and bring two or more key employees for the entire six-day session.

CORNBELT COMMENTS

by CARL HAMILTON

THE price of milk has just increased in Iowa Falls. Here is the background: Up until about 18 months ago, our community was served by two local dairies, along with a cooperative creamery which handled cream on a butterfat basis. Since then, trucks from two large out-of-town daily operations have begun to operate in our community. Upon investigation, I find that these out-of-town dairies have created the situation which has forced our local dairies to join with them in a general price raise. This seems difficult to understand, but it is true.

In short, these out-of-town dairies, although supplying only a small percentage of the total market here, are calling the shots on local prices and marketing practices.

At the end of 1946 there were 527 dairies operating in Iowa. By the end of last year, that total had been reduced to 271. Nearly half had gone out of business, gobbled up by larger operators.

From my investigation of the local situation I know what could happen here.

Let me turn now to farm machinery. One of my friends in the farm implement business returned recently from a meeting at his company's home office. He said that the company made no bones about the program it was following of reducing the number of dealers and concentrating merchandising in the hands of fewer, larger operators.

Those are only two examples found right here close to home. They can be duplicated in other lines of business in every community throughout the nation.

It's the story, not new to anyone, of the big getting bigger and the small independent operator, be he agricultural or industrial, finding the going tougher and tougher. The difference now is that the current is running in the direction of bigness at flood tide stage.

Today the Federal government collects by taxation approximately one-sixth of the national income. The tax power, when used on this scale, is a formidable instrument for shaping the economic structure. In recent years, tax immunity has operated to the advantage of big business and to the relative disadvantage of small business.

There is, just for example, the so-called "depletion allowance" that has been available to gas and oil industries for many years. In the revenue act of 1954, this principle was extended to other industries—including power—and the rates were greatly increased.

Likewise many of the staggering expenditures made by the Federal government during World War II and the Korean conflict have been made with almost complete disregard for the effects on the economic structure. Professor Horace M. Gray of the University of Illinois' Department of Economics says that "no single policy of the Federal government has contributed more to the growth of monopoly than this socially irresponsible disastrous mislocation of military contracts."

In the disposal of public property, the Federal government, again yielding to pressure, sold war plants and surplus war goods at a fraction of their costs to already dominant corporations.

If the nation's farmers have any means whatsoever, through their cooperatives or other organizations, to strengthen their hands in the slightest, they had better be doing it . . . for they grow fewer in number and weaker in position at an alarming rate.

Rural Electrification

LEGAL TOPICS

Preventative Law Avoids Co-op Legal Difficulties

PREVENTIVE law would save clients many headaches and much money if it were practiced in the same way that preventive medicine is now being practiced. If the rural systems would discuss their plans with their lawyers before action is taken, they could avoid many of their legal difficulties. This was the theme of an excellent talk delivered before the legal panel at the annual meeting in St. Louis by Alden A. Stockard, Commissioner for the Supreme Court of Missouri.

Stockard, in association with his brother Gregory, was for years counsel for a number of Missouri rural systems. In December of 1954, he was appointed Commissioner for the Supreme Court of Missouri, and has served in that capacity since. He told his audience at St. Louis that the longer he sits on the bench the more convinced he becomes of the importance of preventive law. He said that, estimating conservatively, at least 25% of the cases which came before him need never have gotten into court at all if the parties involved had only seen their lawyers before they had acted, instead of after they were in trouble.

The commissioner drew upon his years of experience in the rural electrification program to point out case after case that he had handled as a practicing lawyer, which could have been kept out of litigation if only he had been consulted in advance.

Dangers in Critical Comment

For example, most cooperatives publish some form of material. Sometimes that material will contain language critical of some person or some activity. It would be a very simple thing for the rural system to have that critical language checked by its lawyer before it is used. Everyone in the publishing business follows that practice, and it is a good practice to follow regardless of how little publishing you do. It takes only one bad mistake to create a lawsuit that can be both troublesome and expensive.

Another common field of activity which has led to many lawsuits is that of cutting out lines in order to do repair or maintenance work. Often someone on those lines will suffer damage which he claims is the fault of the rural system in cutting off his service as and when it did. It would be very wise, said Stockard, for the rural system to work out with its lawyer the procedures to be followed whenever service is to be cut off because of maintenance or repair work.

Written Agreements

Of course, an obvious situation where the lawyer always should be consulted at the very beginning is whenever a written agreement of any kind is to be entered into. Once the agreement has been signed by the parties, their rights become fixed and the lawyer can only help to interpret what those rights are. He cannot change the agreement. Therefore, in such a case it is important that the lawyer be consulted just as soon as there is any thought of entering into an agreement so that he can advise on the negotiations and help in the preparation of the agreement. This seems to be so obvious that one would think it was not necessary to even mention it, and yet there are cases every day where the client enters into a written agreement and then only after the difficulty arises does he consult his lawyer. In many such cases it amounts to the old saying of "locking the barn door after the horse has been stolen."

Stockard pointed out that one of the practical difficulties in practicing preventive law is that the client does not always realize the need for legal advice in the particular action which he has in mind. To help overcome this difficulty it was suggested that the manager should have a thorough discussion with his lawyer of the various types of activities in which the rural system engages, and together they can develop a plan of prior consultation involving these activities where advance legal advice seems to be indicated. Thus, two general fields of activity where prior legal advice is always important are those which involve questions of wages and hours and the entire labor relations field. Stockard referred to several cases where the rural systems got into serious difficulties on these matters because they had not consulted their lawyers in advance.

It was pointed out, of course, that even with the practice of preventive law it would not be possible to avoid all litigation, any more than by the practice of preventive medicine is it possible to avoid all illness. Certainly, however, a major part of litigation could be avoided in this way. And even those matters that did finally become litigated would not be as difficult or as costly as they would have been had there not been prior discussion and consultation with the system's lawyer. In every type of activity where there are many possibilities of disputes arising and litigation resulting, it is always wise to consider the lawyer part of the planning and advisory group. Big business has learned this lesson well and follows it meticulously. Yet probably there is no single field of activity so fraught with the possibility of litigation as the operation of an electric transmission or distribution system. Therefore, the lesson is even more applicable in this field of activity than in any other.

—L. POTAMKIN

Midwest Power Accounting Meeting Scheduled for May

The Midwest Power Accounting Association, organized in 1951 to encourage more uniform accounting procedures among g-t co-ops, has scheduled its annual meeting for May 23-25.

MPA has a membership of over 40 assistant managers, office managers, comptrollers and accountants representing generation and transmission systems from 11 states. The annual management meeting affords its members an opportunity to solve accounting and office management problems common to these systems. LeRoy Meier, office manager of Minnkota Power Co-op, Grand Forks, N. Dak., is president of the organization.

Each year outstanding men in the fields of accounting and management participate in the meeting. This year's program will include representatives from REA, the University of Minnesota, an accounting firm, and a leading office machine company. Such topics as "Budget Preparation and Control," "Financial Forecasting," "Financial Report Analysis," "Investment of Funds," and "Personnel Selection" will be presented and discussed.

Ten Years Ago This Month—

In April, 1946, RURAL ELECTRIFICATION MAGAZINE reported on NRECA's fourth annual meeting in Buffalo which broke all attendance records with "well over 2,000 from 34 states, the District of Columbia and Canada." Among the ten resolutions passed, delegates (1) condemned the Harris bill substituted for the Poage measure, (2) endorsed the government's public power program for development and expansion of hydro-electric projects and for the transmission of power from said projects, (3) called upon the Federal Communications Commission to designate short wave radio channels to be used in the operation of projects, and (4) recommended that the NRECA Executive Committee establish committees for rural telephone service, system intracommunication service, insurance, legislation, education and publications, power and generation, load building and by-laws.

The Senate defeated a last minute amendment by Sen. Chan Gurney (S. Dak.) to the Deficiency Bill containing a $100-million REA item. The addition specified that "no part of this fund shall be available to the Rural Electrification Administration for the making of any loan for construction of a generating plant unless the Federal Power Commission shall first certify that there is not sufficient electric current available in the area concerned at reasonable rates."

Ark-La Electric Co-op in Louisiana received an offer, postmarked Washington, D. C., signed by heads of three power companies—Frank Wilkes, president of Southwestern Gas & Electric Company; Ham Moses, president of Arkansas Power & Light Company, and Gen. George A. Davis, president of Oklahoma Gas & Electric Company—to buy out the rural electric system. The power company executives, who were appearing before an appropriations committee in an attempt to defeat SPA appropriations, offered assistance to Ark-La President R. I. Davis in getting approval of the Federal authorities in case such sale was effected. SPA had previously announced proposals to utilize the rural electric's lines in its integration of several flood control-power dams in the Southwest.

Rep. A. J. Sabath (Ill.) introduced a bill which called for investigation of "all groups which have or are engaged in the power lobby," following reports that a private power company executive—later identified as C. Hamilton Moses, president of Arkansas Power & Light Company—was offering nylon hose to wives of Congressmen. Moses had been leading the fight against appropriations for rural electrification and SPA.

Urging an "investigation of the expenditures and of the corrupt practices of certain lobbying organizations which are becoming a menace to democratic processes and a threat to our national well-being," Rep. Charles R. Savage (Wash.) leveled a 30-minute barrage at three lobbying organizations, including the National Association of Electric Companies. Terming them a "power trust canker," Savage charged that the lobbies were jeopardizing free enterprise and America's form of government.

With the approval of the NRECA Board, RURAL ELECTRIFICATION MAGAZINE planned expansion of its staff, and advertised for a production editor and advertising manager. It was announced at the same time that the publication would be changed over gradually to a paid circulation basis, with subscriptions to members "to be included in the annual dues."

Names in the News: V. T. Hanlon resumed his job as manager of Lincoln-Union Electric Company, Alcester, S. Dak., after a two-year hitch in the Navy; Richard Haeder was named president of South Dakota Rural Electric Co-op Association; Clarence Reeds was elected president of Oklahoma Electric Co-op, and J. A. (Cap) Krug was appointed Secretary of the Interior.

Quotable Quote: Secretary of Agriculture Clinton P. Anderson—"I regard the farmer-owned, locally-controlled cooperative as the most effective agency in equipping the family type farm to hold its own in our economy of 'bigness.'"

Statewide Association Is NRECA Member

The Wyoming statewide organization joined the ranks of NRECA members recently, bringing the total membership to 929, which in turn represents 3,743,724 consumer-members.

President of the WYOMING RURAL ELECTRIC ASSOCIATION is J. Harold Cash; vice-president is C. Walter Caldwell, and Everett Murray is secretary-treasurer.

NRECA MEMBERSHIP

	Co-op Members	*Consumer Members*
REGION I		
Maine	2	2,465
Maryland	2	29,361
New Jersey	1	1,710
New York	5	4,684
North Carolina	32	174,009
Pennsylvania	14	67,724
Vermont	3	5,939
Virginia	17	96,485
Northeastern Assn.	1	.....
	77	382,377
REGION II		
Florida	15	50,614
Georgia	38	214,519
South Carolina	25	111,724
	78	376,857
REGION III		
Alabama	19	119,028
Kentucky	24	179,313
Mississippi	18	169,536
Tennessee	19	222,076
	80	689,953
REGION IV		
Indiana	42	147,948
Michigan	14	59,883
Ohio	30	117,355
West Virginia	1	2,425
	87	327,611
REGION V		
Illinois	27	121,787
Iowa	56	141,191
Wisconsin	30	81,488
	113	344,466
REGION VI		
Minnesota	49	197,534
North Dakota	25	63,443
South Dakota	35	68,277
	109	329,254
REGION VII		
Colorado	22	61,458
Kansas	35	85,811
Nebraska	35	97,175
Wyoming	16	20,226
	108	264,670
REGION VIII		
Arkansas	19	126,119
Louisiana	11	81,284
Missouri	41	208,327
Oklahoma	27	122,320
	98	538,050
REGION IX		
Alaska	5	11,045
California	5	4,414
Idaho	10	14,230
Montana	24	37,128
Oregon	17	31,970
Utah	2	1,778
Washington	17	30,493
	80	131,058
REGION X		
Arizona	7	11,828
New Mexico	16	37,771
Texas	76	305,875
	99	355,474
GRAND TOTALS	929	3,743,724

LEO FORREST, manager, Deaf Smith County Electric Co-op, Hereford, Tex.

J. ARTHUR ANDERSON, director, Poudre Valley Rural Electric, Loveland, Colo.

FLOYD JONES, manager, Gibson County Electric Membership Corporation, Trenton, Tenn.

HARRY L. OSWALD, manager, Arkansas State Electric Co-op, North Little Rock, Ark.

JACK COCHRAN, manager, North Arkansas Electric Co-op, Salem, Ark.

FLOYD GIBSON, manager, Oklahoma Statewide Electric Co-op, Oklahoma City, Okla.

CECIL NEELY, manager, Northfork Electric Co-op, Sayre, Okla.

E. V. LOOMIS, manager, Peoples Electric Co-op, Ada, Okla.

JACK GAMBRELL, manager, Choctaw Electric Co-op, Hugo, Okla.

MILTON T. POTTS, manager, Sam Houston Electric Co-op, Livingston, Tex.

J. S. ROBBINS, manager, Jefferson Davis Electric Co-op, Jennings, La.

H. M. DILLON, manager, East Central Oklahoma Electric Co-op, Okmulgee, Okla.

GEORGE N. ROBBINS, manager, Barry Electric Co-op, Cassville, Mo.

F. A. MARTZ, manager, N.W. Electric Power Co-op, Cameron, Mo.

J. L. JOHN, manager, Upshur Rural Electric Co-op, Gilmer, Tex.

TRUMAN GREEN, manager, Central Electric Power Co-op, Jefferson City, Mo.

SID MCMATH, attorney, Arkansas State Electric Co-op, North Little Rock, Ark.

LYLE KILLINGSWORTH, manager, Washington-St. Tammany Electric Co-op, Franklinton, La.

R. E. HOLLADAY, JR., manager, Northeast Louisiana Power Co-op, Winnsboro, La.

TROY L. MITCHELL, manager, Jasper-Newton Electric Co-op, Kirbyville, Tex.

REX E. DEWEY, manager and LLOYD EVANS, president, KAMO Electric Co-op, Vinita, Okla.

J. M. MADDOX, manager, Southwest Rural Electric Co-op, Tipton, Okla.

H. D. MILLER, general manager and M. E. CASTLEBURY, assistant general manager, City Utilities of Springfield, Mo.

T. E. BOSTICK, manager, Woodruff Electric Co-op, Forrest City, Ark.

V. B. SHAW, manager, Wood County Electric Co-op, Quitman, Tex.

FRED MCVEY, REA, Washington, D. C.

JOHN B. O'BRIEN, JR., and ARTHUR PERLMAN, House Public Works and Resources Subcommittee, Washington, D. C.

JOHN SARGENT, president, Adams Electric Co-op, Camp Point, Ill.

LEON MILLER, attorney, Top O'-Michigan Rural Electric Co-op, Petoskey, Mich.

OLIVER ROSE, president, Rushmore G & T Co-op, Newell, S. Dak.

Mr. and Mrs. A. R. Teater of Central Electric Co-op in Redmond, Oreg., are shown looking at the latest copy of RURAL ELECTRIFICATION magazine during their visit to NRECA. Teater is the president of Central Electric Co-op.

Nebraska Electric Leader Dies, Was National Director

Joe Zikmund of Brainard, Nebr., a familiar figure in the rural electrification program, passed away March 6 after a long illness.

He was Nebraska's first representative on the NRECA Board of Directors, serving from 1945 through 1947, and an organizer of the Nebraska statewide, of which he was president for four years. On the local level he was a charter member of Butler County Rural Public Power District which he helped to organize in 1936 at David City, Nebr., and subsequently became president.

Born in Czechoslovakia in 1890, Zikmund came to the United States in 1906 and settled in Omaha, Nebr. He worked as a blacksmith in the Union Pacific Railroad shops for six years, later moving to Brainard where he started a country blacksmith shop and in time a farm implement store.

In 1918 Zikmund began his career as a professional wrestler, and in 1927 won the world's heavyweight title, in the period when that sport was at a pinnacle of popularity.

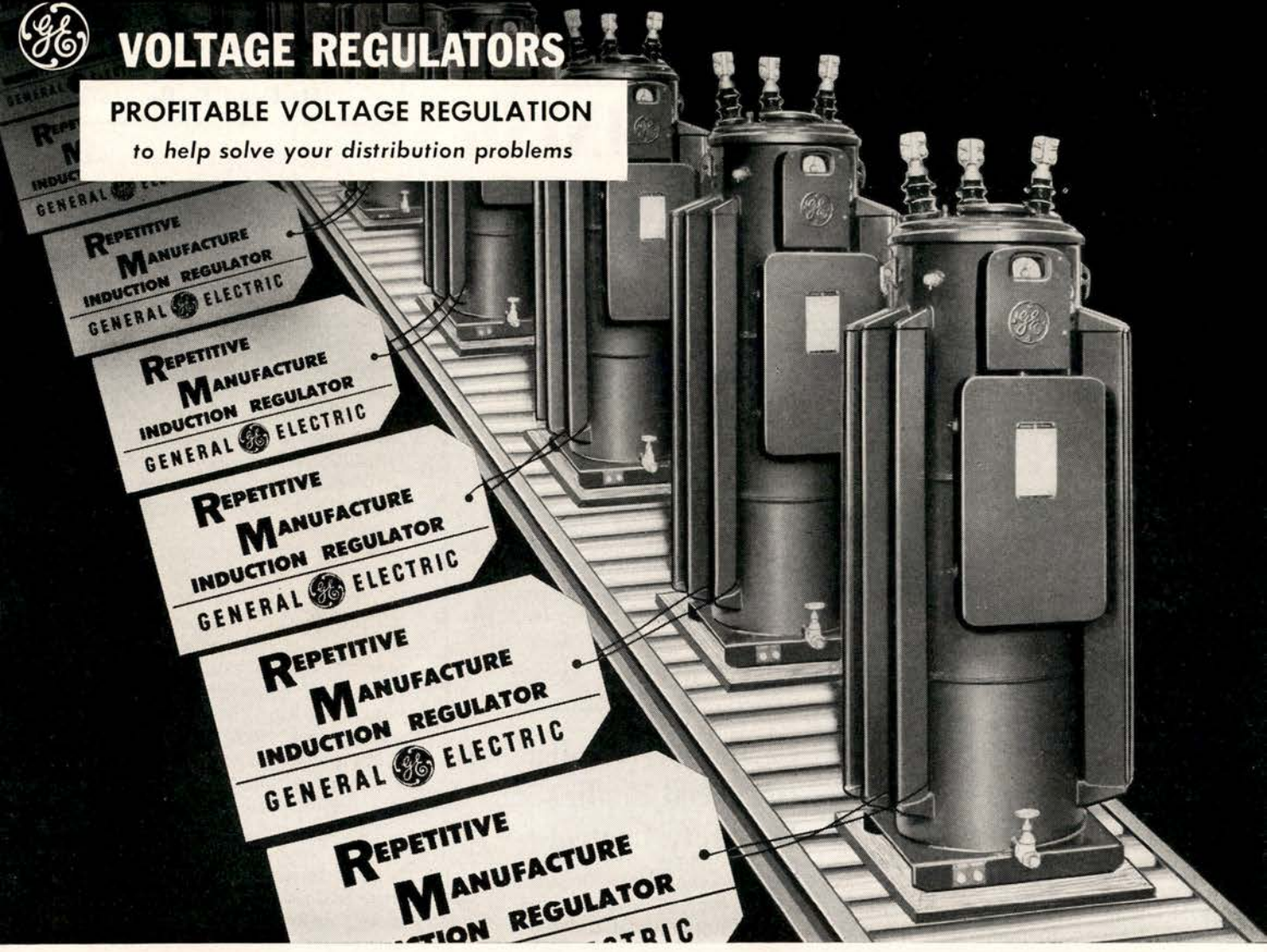
He was mayor of Brainard for 12 years, during which time he was instrumental in getting a city water system established, sewage and electric light systems and better schools.

Zikmund married the former Anna Knezacek of Omaha in 1908, and she has been almost as active as her husband in civic and rural electrification affairs. She was the first president of the NRECA ladies' committee, and presided over the ladies' activities at several annual meetings.

Zikmund is survived by Mrs. Zikmund and their two married daughters.

VOLTAGE REGULATORS

PROFITABLE VOLTAGE REGULATION
to help solve your distribution problems



New General Electric Induction Voltage Regulators Save up to 32%

Here are the actual Net Prices*
125-KVA "RM" 2500/5000-Volts

$3894

Replaces these SEVEN units:

2500-Volts	5000-Volts
75-KVA $4072	62.5-KVA $3919
100-KVA $4870	75-KVA $4330
125-KVA $5537	100-KVA $5124
	125-KVA $5753

114.3-KVA "RM" 7620-Volts

$4092

Replaces these TWO units:

7620-volts
76.2-KVA $4194
114.3-KVA $5819

*Eastern Zone. Western Zone prices slightly higher. Manufacturer's suggested resale prices.

Two REPETITIVE MANUFACTURE sizes cover NINE former station ratings

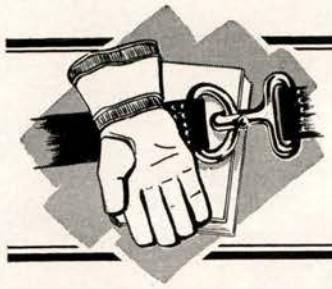
COST SAVINGS of over 30% are now possible with new General Electric "RM" induction voltage regulators. Nine of the most popular ratings have been consolidated into two *standard* "RM" units, each of which costs less than any of the units it replaces!

MORE LOAD GROWTH CAPACITY, at less cost. Utilizing the benefits of high-volume Repetitive Manufacture, these regulators offer the same quality and design features as previous G-E induction units, plus new improvements.

Get full information today on this new cost-saving answer to today's expanding loads. Contact your G-E Apparatus Sales representative, or write to Section 423-12, General Electric Company, Schenectady 5, N. Y.

Progress Is Our Most Important Product

GENERAL ELECTRIC



JOB TRAINING AND SAFETY

Find Basic Cause if Your Accident Investigations Are to Prevent Repeats

"Accident investigation is the best tool a safety engineer could have at his command. Every case investigated is in itself an evaluation of the particular safety program with the facts revealed. We should find the strong and weak places of the entire program. Each fact ascertained will point directly to a well-established program component and the need for further investigation of the part concerned."

The above quoted paragraph is from an article, "Accident Investigations," by D. Paul Cochran, safety superintendent of the U. S. Naval Air Station at Pensacola, Fla., appearing in the March issue of *National Safety News*.

The principal purpose of accident investigation, he points out, is to obtain information that will help in the prevention of accidents, and first aid cases should be investigated as thoroughly as those causing death or serious injury. The following case is cited to emphasize the necessity for a complete report if results are to be obtained:

"If a worker got something in his eye because he was not wearing goggles as required, it is not sufficient merely to report 'particle in eye.' It is not even sufficient to report that the worker was not wearing goggles. It should also be determined why he was not wearing his goggles. In a case like this, the information necessary to prevent recurrence is several steps removed from the actual accident itself, but the basic reason must be identified and corrected or similar accidents will continue to happen from the same 'obvious' cause, 'failure to wear goggles,' which is not the cause at all.

"There is some reason why the worker did not wear his goggles, and the investigation must find this reason. Although sometimes difficult to obtain, a determined attempt should always be made to find the basic reason."

Job Safety Week Is Set for May 13-19

President Eisenhower has designated May 13-19 as Job Safety Week.

In a recent statement the President called on all Americans to help make the week a success. He said, "We must all make it a business of primary importance to devise methods for preventing needless accidents" to workers.

Compile Ten Rules Of 20,000 Replies In Safety Contest

More than 20,000 fundamental safety rules were submitted in the "Ten Fundamental Rules of Safety" contest sponsored this past summer by Industrial Supervisor Magazine. Contest entries came from all sections of the United States and Canada as well as from Trinidad, Jamaica, Rio De Janeiro, Japan, Philippines, Mexico, Peru and Hawaii.

This list of "Ten Basic Safety Rules" was compiled by the contest judges from the best rules submitted:

1. Follow instructions; don't take chances; if you don't know, ask.
2. Correct or report unsafe conditions.
3. Help keep everything clean and orderly.
4. Use the right tools and equipment for the job; use them safely.
5. Report ALL injuries; get first aid promptly.
6. Use, adjust and repair equipment only when authorized.
7. Use prescribed protective equipment; wear safe clothing; keep them in good condition.
8. Don't horseplay; avoid distracting others.
9. When lifting, bend your knees; get help for heavy loads.
10. Comply with all safety rules and signs.

"He Used To Be . . ."

He used to be a real "hurry-wart." First one down the steps. First one out of the plant. First one through the intersection . . . but there's no rush now. He's got lots of time. An eternity of time.

He used to be a great grumbler. Griped about all the "fool drivers" he met. Griped at safety meetings about all the "dull guff" he had to listen to . . . but there's no grumbling now. He's quiet, real quiet.

He used to be the super-aggressive type. Bulled his way through. Pulled switches and pressed buttons without bothering to look or think . . . but there's no blind motion now. No motion at all.

He used to be full of the nervous fidgets. Jittered all over the road, all through the plant, and all through the day . . . but there's no jittering now. He's calm, real calm, and still.

He used to be the absent-minded kind. Forgot to signal his turns. Forgot to look both ways. Forgot to check the guard on his machine . . . but there's no forgetting now. No remembering, either.

He used to be the chip-on-the-shoulder type. Had all the answers. No safety director could tell him what to do. He'd do it his way . . . but there's no back-talk now. No talk at all.

He used to be the real dare-devil. Loved to risk his neck. Loved to take the dangerous short-cut. Got a real kick out of taking chances . . . but there's no chance-taking now. No taking anything, not even a breath.

"He used to be . . ." A sad story that will be written again and again and again. As long as we don't eliminate our serious faults, there's an excellent chance that they will eliminate us . . . there's no exaggeration about that now. It's right. It's dead right.

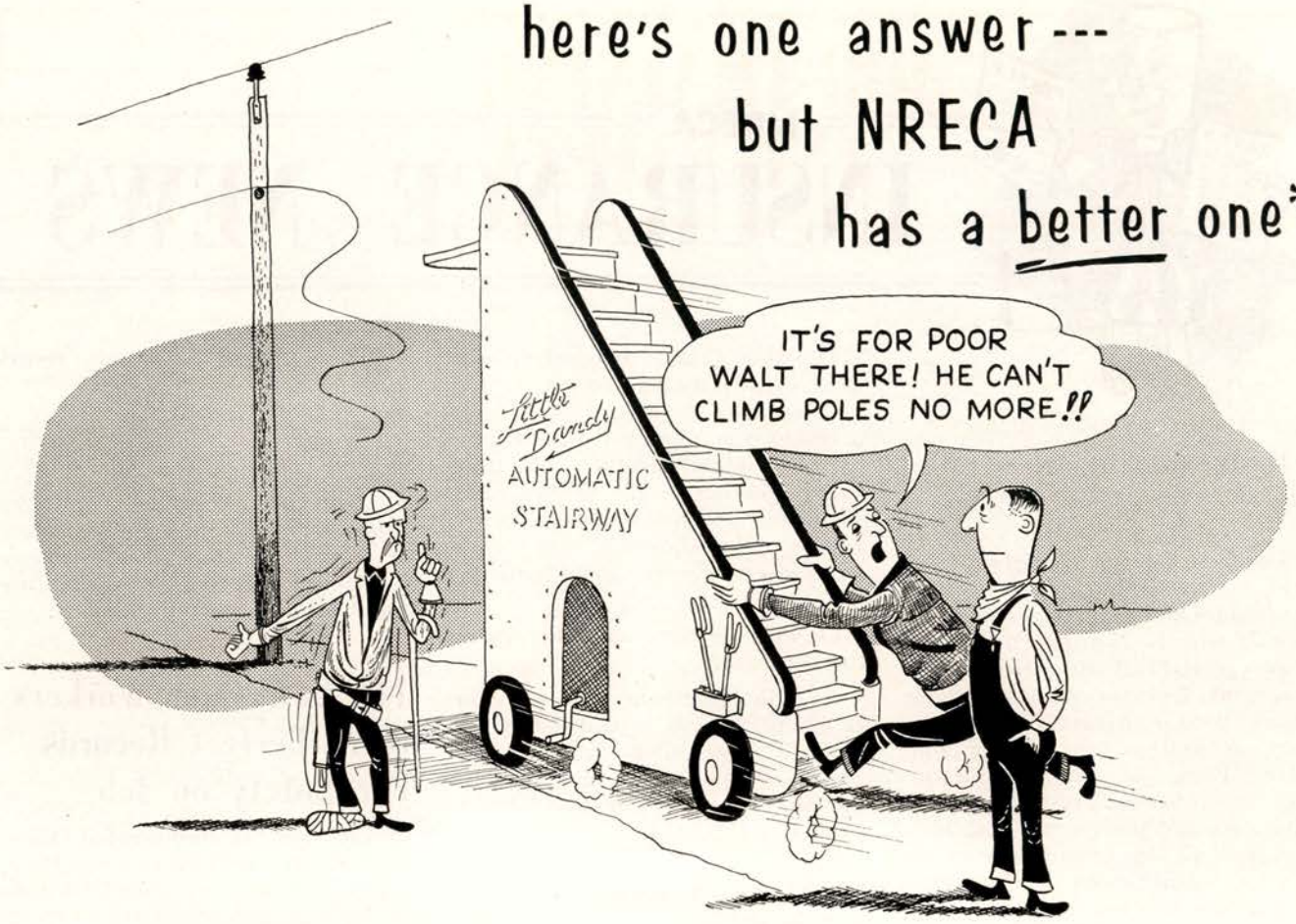
Sheehan New President

James Sheehan is the newly elected president of Wyoming Electric Linemen's Safety Committee. Ivan Whipple, manager of Wyrulec Company, Lingle, is the committee's vice president and Maurice E. Mann, secretary.

Need "Human Engineering"

Good planning will eliminate the physical hazards but "human engineering" alone will create the desire in people to acquire a safe work philosophy expressed in safe work habits.

here's one answer---
but NRECA
has a better one*



***We mean NRECA's Retirement and Security Program. Look over these benefits for participating permanent employees and we believe you'll agree:**

Permanent Disability

If you can't climb and can't work at an equivalent job:

We pay at least $50 per month during your eligibility period.

I can never climb again but can work at a lesser job with the same or another system:

If you are permanently disabled from your usual work or its equivalent, you can even work at the same system so long as your disability payment and your current salary do not exceed 75% of your salary at date of disability.

Too Old

If you want early retirement before age 65:

We retire you any time after your 55th birthday with termination of employment.

You can work at any job and still collect your early retirement or your regular retirement monthly payment:

Work at any job other than a rural electric system will not disqualify you from early retirement benefits. You can continue to work at your system after age 65 and collect your regular retirement benefit.

Willie Wiredhand Says—"Find out how your system can enjoy the benefits of this coverage."

Write to: Don Dunham, Insurance Department
National Rural Electric Cooperative Association
1303 New Hampshire Ave., N.W., Washington 6, D. C.

NRECA

INSURANCE NEWS

By DONALD H. DUNHAM

Director, NRECA Insurance Programs

The most valuable part of my field trips, visiting as I do all sections of the country and coming into personal contact with both management and employees is, I feel, the questions that arise when I discuss the various programs, both retirement and insurance, as well as job training and safety. These questions give me an opportunity to clarify program phases which are not understood and, too, they give me definite information as to what modifications are necessary to meet the needs of the systems and their employees.

I have found in numerous systems the outside workers have an incorrect impression or at least are uncertain as to the tailormade benefits available to them under the NRECA Retirement and Security Program. To provide this factual information, I am devoting my space this month to some of the most frequent questions asked during my informal conferences with linemen and other outside workers.

When does the average lineman cease climbing?

According to the statistics we have available, the mean average when he can no longer climb is age 59.

If this is true, what happens to my normal retirement date of age 65?

You have available both early retirement and permanent disability benefits.

If I am disabled either by age or injury, am I eligible for disability benefits?

Any participant under the Permanent portion of the program, either an inside or outside worker, who can no longer perform the duties of his usual occupation or an equivalent occupation, shall be deemed to be a permanently disabled employee for the purposes of the program. Such a disabled employee is immediately "vested" in the benefits of the program, whether or not he has completed two-thirds of the time between his original employment date with a rural electric system and age 65.

How long do these disability benefits continue?

The disability benefit, a minimum of $50 per month, is paid to the employee for the number of years and months that employee has been under the Permanent portion of the program.

What happens to my insurance while I am disabled?

Notwithstanding the fact that neither the employee nor his employer makes any contribution, the NRECA fund continues to pay the full amount of the employee's insurance premium to the insurance carrier until the policy is one-fourth paid up.

Are my retirement accruals and credits in the Supplemental Service lost when I am classified as "disabled"?

The employee's accrued retirement and Supplemental Service credit are "frozen" as of date of disability and held for payment to him at normal retirement date, age 65.

Am I permitted to do any work while I am disabled?

Our disability benefit payment to a disabled employee does not require "Permanent and Total" disability but only requires that the person be permanently disabled from his regular or equivalent job. In fact, an employee can work in his same system or any other system at a lower salaried job so long as his new salary and his disability payment together do not exceed 75% of his salary as of date of disability.

What is meant by "early retirement?"

Optional retirement at age 55 is available upon termination of employment. Since the average work life span of a lineman terminates somewhere between age 57 and age 59, a program which requires an employee to go to age 65 becomes impossible for the outside workers.

* * * *

116 Dairyland Workers Have Perfect Records For Safety on Job

A total of 116 employees of Dairyland Power Cooperative recently received certificates of award for having maintained accident-free records on the job. Ninety-three received the award because they have completed from five to ten years of service without a lost-time accident and an additional 23 had a perfect record after serving between ten and 15 years. The awards are presented annually by the Wisconsin REA Job Training and Safety Committee.

Dairyland's General Manager, John P. Madgett, in congratulating the award-earning employees, said:

"The benefits of an effective job training and safety program are many. Nevertheless, we must never lose sight of the fact that we are in this program to save a worker's body, to save a life. All other considerations must be subordinate to this. I believe it is important to also make our people aware of the 'why' of their activities and not merely the 'how.' Only in this way can we get a better, safer and more efficient employee, as well as the by-products of pride on the job, plus over-all efficient operations."

Tilden Named Chairman

At the annual election of officers by the Idaho Associated Safety Council, Art Tilden was elected chairman, Max Stewart, vice chairman and Howard Gibbs was retained as secretary-treasurer.

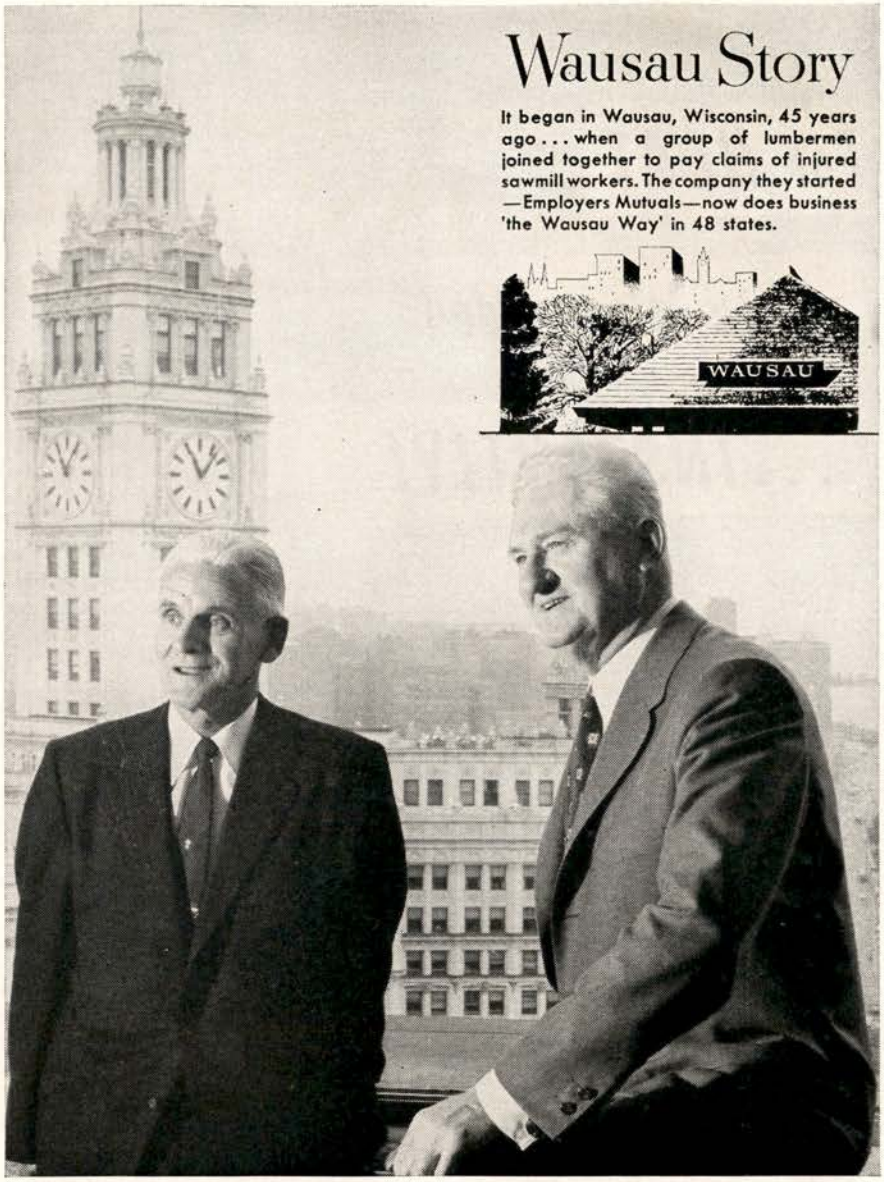
There's a bit of Wausau around Chicago's "Loop"

as told by **WILLIAM F. MOONEY**
Reporter,
Chicago Daily News

"Employers Mutuals, the folks who've been running that interesting series about Wausau wanted to demonstrate the way they handle workmen's compensation insurance.

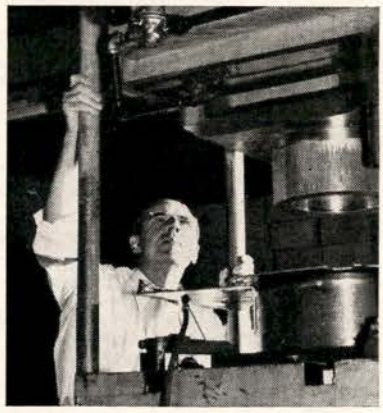
"But instead of telling the story themselves, Employers Mutuals felt the fairest way would be an impartial report. So as a 'curious reporter' I set out to see examples of the 'Wausau personality' at work here in Chicago. Some of the unusual things I found are reported in the pictures and captions on this page."

"Recently, Henry Julian (right), a machinist, lost his hand in a plant accident. Despite excellent medical care, he sat home worrying about how he could work again. Clare Schwartz (center), an Employers Mutuals' nurse, lifted his spirits. After many friendly talks, she encouraged him to try to use a new hand—even took him to the rehabilitation center to get him started. Later Miss Schwartz arranged for Mr. Julian to have a chance at his old job. He's back now and doing fine. Employers Mutuals, incidentally, was the first and still is one of the few companies in the field with a *permanent* nursing staff."



"E. J. Brach and Sons, world's largest candy manufacturers, had always thought of workmen's compensation insurance as a fixed expense—subject to little variation. Particularly so, because close cooperation between the Brach Company and its employees had resulted in an outstanding safety program. Safety engineers from Employers Mutuals proved, however, that even under such ideal conditions accidents could be reduced considerably—and in a relatively short time. As a result, insurance costs for this company have been cut and over-all profits increased. 'Employers Mutuals' performance for us and with us has been superb,' say Frank V. and Edwin J. Brach, Executive Officers, pictured above."

The machine nobody would touch: "Recently, a Chicago firm had a severe injury at an embossing press. From that moment workers hesitated to use it, fearing injury. A production bottleneck developed. But the company got in touch with Employers Mutuals' Frank Hausman (right), a safety engineer specializing in press accident prevention. Mr. Hausman was able to design—on the spot—a guard which prevented further accidents and increased production."



Employers Mutuals writes all lines of fire and casualty insurance. We are one of the largest in workmen's compensation. *For further information see your nearest representative or call us in Wisconsin on our special line, at Wausau 2-1112.*

Employers Mutuals *of* Wausau "Good people to do business with"

POWER USE BUILDERS

Co-op Sponsors Essay Contest

Middle Tennessee EMC, Murfreesboro, Tenn., is sponsoring its third essay contest among the junior English classes in its service area. More than 550 students from 18 high schools in the co-op's four-county area participated in last year's contest.

This year the 500 to 1,000 word themes will be on "The Influence of Electricity on Rural Living." A first and second prize of a $25 savings bond and $10 in cash will be awarded the winners in each of the participating high schools. Each first prize winner will then compete for a grand prize of a $100 savings bond to be presented at the co-op's annual meeting.

To promote the contest, co-op personnel have met with the English teachers and presented reference material to the school libraries. Two training films have also been shown to the classes.

Kentucky to Award "Oscars"

At the conclusion of each of the five major sales campaigns of the year, the Kentucky statewide will present an "Oscar" to the co-op which has sold the campaign item to the highest percentage of its members during the campaign period. The five major promotions will be on dryers, ranges, water systems and water heaters, and freezers. The Oscar will be awarded on the basis of dealer and consumer reports of sales made to each co-op and forwarded monthly to the statewide office by the co-op. The Oscar will, in each case, become the permanent property of the co-op winning it.

Open House Key to Promotion

The familiar "open house" is being used by Walton EMC, Monroe, Ga., to create interest and educate rural electric consumers in "Better Electrical Living." The co-op asked some of its members to open their homes for others to see what they have done in the way of electrical improvements. According to the co-op's newsletter, "Owners all seemed delighted to be able to show our members some of the newer ideas they are putting into practice in their homes." The newsletter carried pictures of the homes to be visited and a brief description of the features of each. The home show is a part of the co-op's overall program which includes such promotional gimmicks as a low-cost financing plan for major electrical appliances, free electricity, and a service entrance exchange arrangement. The co-op also features the Willie Wiredhand Dealer program.

Clippings and Quotes Worth Consideration

"The very fact that bottled gas salesmen are so active in the farm and rural market is a good rather than a discouraging sign. There is no competition where there is no business. The manager, utilization advisor, home economist and power company rural service supervisor who doubts that there is much new business to be had in the farm market hasn't talked to an LP salesman lately" . . . Berko Manufacturing Corp., 212-40 Jamaica Ave., Queens Village 28, N. Y., has recently prepared a new eight-page, two-color catalog which embraces all of the firm's glass electric radiant heat panel line. The catalog, GC-101, also includes information on both low voltage and line voltage thermostat controls. . . .

If you are planning a water systems promotion . . .

. . . this is for you . . . NRECA's

RUNNING WATER

PROMOTION KIT

RURAL ELECTRIC SYSTEMS have been placing increasing emphasis on water systems promotion in their power use programs. And it's no wonder! The best information we've been able to get shows that over 50% of our farms are still without modern, pressure water systems. Our figures also show that the increase in the use of electricity after a farm gets running water is tremendous. You can expect kwh consumption to triple after a reasonable period of time! And it's good load.

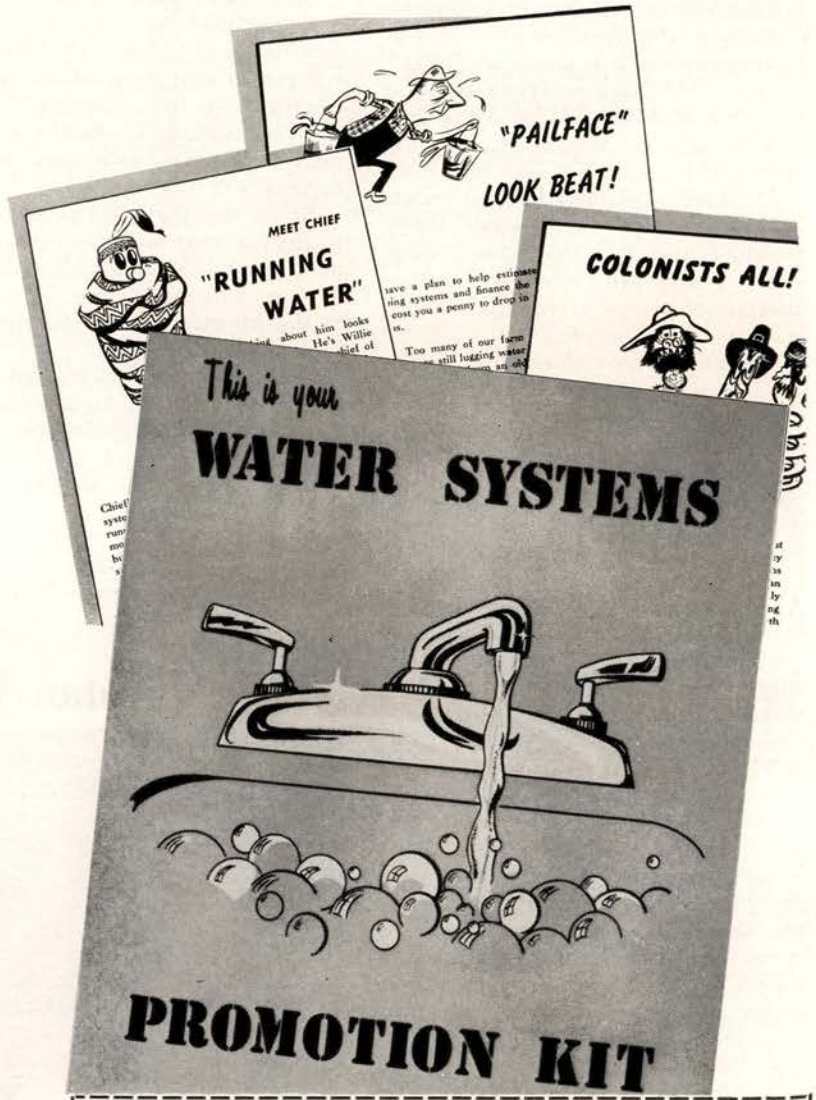
As an aid to your water systems promotion, NRECA has prepared this RUNNING WATER PROMOTION KIT.

It will help get your message to the consumer.

It will help you enlist dealer cooperation.

It will help sell water systems.

You can order these kits in any quantity. Get one for each of your cooperating dealers.



THE KIT CONTAINS

- **ads**
- **banners**
- **general & technical information**
- **promotion plans and ideas**

mats • repros • pamphlets

To National Rural Electric Cooperative Association
1303 New Hampshire Avenue, N. W.
Washington 6, D. C.

Please send me ---------- Water Systems Promotion Kits

☐ I am enclosing the payment of ---------- ($10.00 per kit)

☐ Please bill me for this order.

Send the kits to

.....

.....

.....

RURAL ELECTRIC LOCAL HEADLINES

Speaking before the 19th annual meeting of the Missouri State Rural Electrification Association in Jefferson City, Mo., former Arkansas Governor Sid McMath told power co-ops they should "get interested and stay interested in politics."

McMath explained his statement by saying people must know their Senators and Representatives, and know if they are "working for the interests of private companies or the interests of the people."

The former governor said that "In the last 50 years, the United States government hasn't spent $2½-billion for power, but rather has invested the money in the nation's farmers. Uncle Sam is making money on his loans to the rural electrics in the United States." McMath went on to describe the Missouri Rural Electrification Association as "one of the most democratic organizations in the U. S."

He charged that Congress is "not only trying to increase our rates, but also seeks to destroy our preferred customer status."

The popular Arkansas leader, who is currently legal counsel for the Arkansas State Electric Co-op, said that normally he would urge co-op men to vote for members of the majority party in Congress. "But in view of the actions of some of that majority party in representing oil, gas and utility interests, I can't say that in every instance you would be voting for the right man."

* * *

A program designed to associate electrical projects carried on by the 4-H and Future Farmers of America is being conducted by the Yellowstone Valley Electric Co-op of Huntley, Mont.

Clarence Rupp, power use advisor of the co-op, pointed out that all the rural electric co-ops in Montana are participating in the program. He said that since 4-H Club and FFA members will soon be farm operators, the program is designed to teach them the basic uses of electricity. The program will be climaxed by the second annual Yellowstone Valley Youth Electric Fair.

The Youth Fair will include an electrical construction section, and electrical equipment made by 4-H Club and FFA members; an electrical demonstration section, where construction and proper use of electrical equipment will be featured, and an electrical welding section where equipment made by electric welding, such as culverts, gates and posthole diggers, will be exhibited.

Rupp said that cash prizes will go to first, second and third place winners in each section. All first place winners will enter state competition at the Montana Youth Electric Fair in Lewistown, Mont.

Rupp said future plans call for establishment of scholarships to state institutions based on the electric fair competition.

The National Rural Electric Cooperative Association at their recent Annual Meeting in St. Louis, Mo., adopted a resolution encouraging the various state organizations to organize programs informing the farm youth of the nation about farm electrification, and its contribution to the improvement of farm economy.

* * *

The Central Electric Power Co-op, a generation and transmission cooperative in Jefferson City, Mo., has announced plans to construct a $100,000 headquarters service building.

Meanwhile, the Rural Electrification Administration approved a $250,000 loan for system improvement of the co-op. Central Electric plans to use the loan for construction of a new substation and ten miles of new transmission lines.

The new transmission lines will link Central Electric to Co-Mo Electric Co-op, a distribution co-op at Tipton, Mo.

Central Electric's new headquarters building will be a one-story structure with six to eight rooms and service facilities for storage, trucks and other equipment.

North Dakotan Voted "Outstanding Boss"

James Coleman, manager of Nodak Rural Electric Co-op, Grand Forks, N. Dak., was named "Outstanding Boss of the Year" last month by the Grand Forks Junior Chamber of Commerce. This annual award is based on the "boss's" relations with his employees and upon his participation in community activities. Mayor Lunseth (left), of Grand Forks, is shown presenting Coleman with a plaque at the annual Chamber of Commerce dinner. Watching the presentation are (standing): Herm Livingston, president of the Grand Forks Jaycees, and George Longmire, toastmaster for the dinner.

YOUR REA CO-OP

can save time and money on all accounting operations with the Burroughs Sensimatic

Free booklet gives details of the Burroughs Sensimatic accounting plan that's right for you

Bill and ledger operations . . . self-billing systems . . . capital credits . . . all your accounting can be simplified and speeded up with the Burroughs Sensimatic. Just choose the accounting plan that best suits your requirements and let the Sensimatic do the rest . . . as fully explained in this plan "tailored" especially for REA cooperatives.

The Sensimatic is easy to operate—its exclusive design and many automatic features eliminate the need for extensive training.

Your Burroughs representative will be glad to show you, without obligation, how the Burroughs Sensimatic can help solve all your accounting problems. Just fill in and mail the coupon below, or call your nearest Burroughs branch.

The Burroughs Sensimatic can perform all these operations quickly, and at low cost, by combining all your accounting in one mechanized system—

CUSTOMER ACCOUNTING
- Billing (to suit your requirements)
- Count of bills
- Revenue totals
- Proof of billing
- Cash and penalty

CAPITAL CREDITS
- Automatic capital credits rate chart
- Capital credits statement
- Capital credits ledger

GENERAL ACCOUNTING
- Pay checks and check register
- Employees' earnings records
- Material and supplies ledger
- Operating expense ledger
- General ledger

Burroughs Corporation, Detroit 32, Mich.

Please send me your booklet, *A Complete Billing and Accounting Plan for REA Cooperatives.*

NAME_____ TITLE_____

CO-OP_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

RE-16

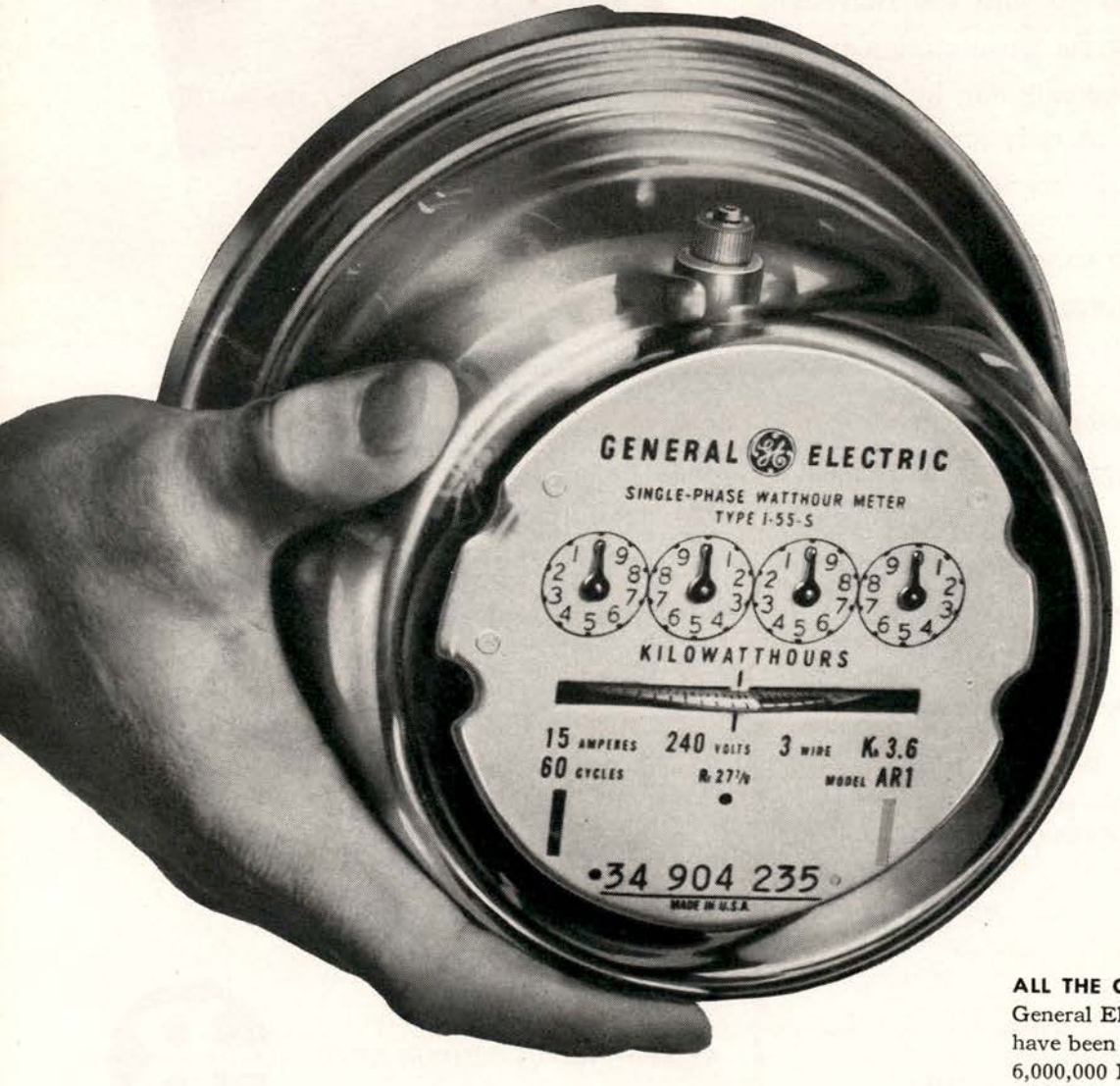
WHEREVER THERE'S BUSINESS THERE'S

Burroughs

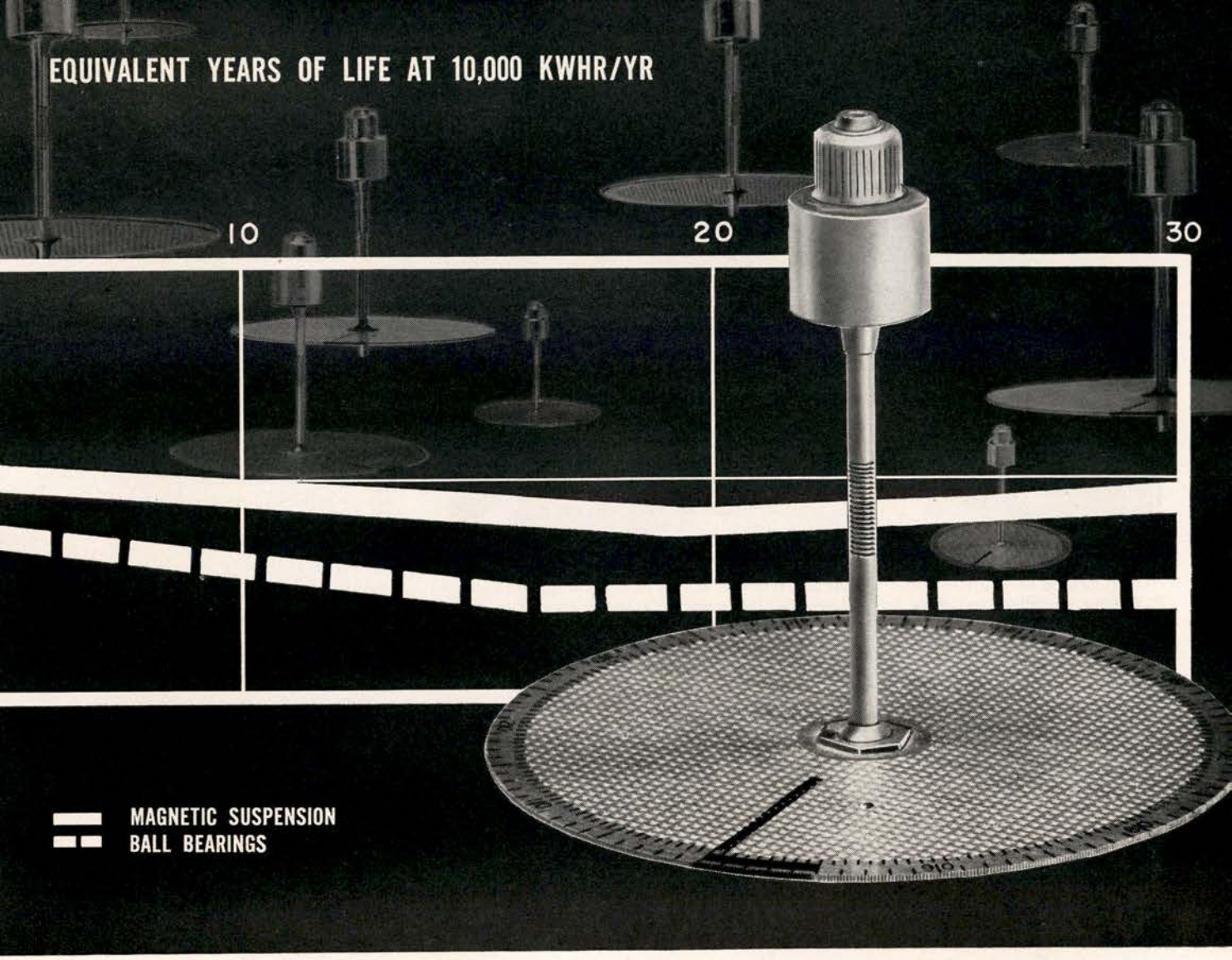
"Burroughs" and "Sensimatic" are trademarks.

Life tests prove . . .

GREATER SUSTAINED ACCURACY



ALL THE COST-SAVING features of General Electric's I-50 meter family have been proven by the more than 6,000,000 I-50's in service today.



G-E MAGNETIC SUSPENSION ASSURES ACCURATE MEASUREMENT OF TOMORROW'S LOADS

New test data on meter performance, compiled in G-E research laboratories, prove that General Electric's revolutionary "floating disc" will accurately measure tomorrow's greater loads. During these accelerated life tests, identical loads were applied to G-E meters with magnetic suspension and to meters using other types of bearing systems to support the moving element.

The test results, based upon a total load of 300,000 kwhr (the equivalent of 30 years' operation at 10,000 kwhr), proved that only General Electric meters with magnetic suspension offer you these important benefits:

Greater sustained accuracy (see chart above)

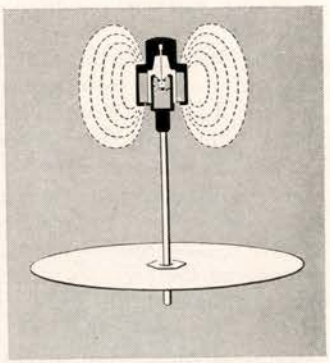
No bearing wear

Greater return on your meter investment

In addition to magnetic suspension, G-E meters provide you many other money-saving features. For example: all meters of the G-E I-50 family offer you a unique one-piece retarding system which assures stability and long life . . . rigid unit construction for maximum strength . . . corrosion-resistant and easier-to-read pointer and cyclometer registers.

For the meter you can install now and depend on for many extra years of accurate service, specify the meter designed for the greater demands of tomorrow's electrical living. Choose meters of the General Electric I-50 meter family.

For more information contact your nearby General Electric Apparatus Sales Office, or write General Electric Company, Section 621-5, Schenectady 5, N. Y.



MAGNETIC SUSPENSION of rotor eliminates conventional bearings, greatly reduces maintenance and replacement costs.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Linemen Use "Operation Air Repair"

Linemen of Plumas-Sierra Rural Electric are shown in the foreground preparing supplies that were later flown to the scene of a break in the co-op's power line. The ski-equipped *Sierra Booster* plane is shown in the background.

Cooperation was the slogan of "Operation Air Repair" last month when a heavy snow storm caused a break in the electric distribution line of Plumas-Sierra Rural Electric Co-op in Sierra Valley, Calif.

The combined efforts of the Bank of America, Nervino Aero Service and the *Sierra Booster,* a local newspaper in the area served by the co-op, were needed to help repair the break which occurred in the rugged Sierra Valley of California.

Manager Cone Hunter said the entire line crew of the co-op was out hunting the break, but bad weather slowed the search to one Snoweasel, a tractor type vehicle equipped with skis in front.

The Snoweasel broke through the ice and dropped into the head waters of the Feather River. The driver, Russ Allen, and three linemen with him were able to escape without injury, but had to wade through ice and water to their armpits to get away.

After this near tragedy, Hunter employed the services of Frank Nervino, manager of the Beckwourth Airport in Beckwourth, Calif., and ski-equipped plane, the *Sierra Booster.*

Nervino discovered the break in the line only a short distance from the abandoned Snoweasel. Just as he discovered the break, someone at the Beckwourth substation turned on the current, which resulted in a huge flash and a melted pothole in the snow.

Hunter asked the Bank of America to loan their pilot, Hugh Arnold, to fly the plane into the area, as Arnold was about 30 pounds lighter than Nervino.

Arnold flew Hunter to the line break, but was forced to land about a half mile away because a 500-foot fogbank had settled over the scene. After plowing through soft snow and slush the two men reached the break, where Hunter wrote instructions for the waiting repairmen.

After linemen had gathered the materials that Hunter had requested, Arnold took off with the supplies and one lineman. They reached the break and air-dropped the supplies to Hunter, then landed on a nearby emergency field.

The hazardous landings and take-offs were repeated five times before all the needed linemen were at the scene of the break. Within 30 minutes the break was repaired and Arnold began the air evacuation of the linemen.

MYTH

(*Continued from page* 17)

does not do this. It is organized for the purpose of serving its own members. All members are treated equally and anyone who wishes to and who can comply with the conditions of membership is eligible to join. Nevertheless, service to a consumer is rendered to him as a member of the cooperative and not as a member of the public. In other words, the cooperative is neither more nor less than a group of people who have joined together to render to themselves a service which they all desire and need. In simplified view, it is no different from the case where a group of neighbors come together to buy a lawn mower jointly, with each having the right to use the lawn mower for his own lawn. To cover the cost of maintenance and eventual replacement, each pays into a joint fund a specified amount for each hour he uses the lawn mower. Also, in order that there shall be no profits, any money left after these purposes have been taken care of is returned to the participants in the same proportion that they have contributed to the fund. And everyone living in that same block can participate in the arrangement on the same terms. In such a case, it is clear that no dealing with the public is involved. The rural electric cooperative is the same type of organization operated in the same way, only on a larger scale.

A rural electric cooperative is an organization which is owned by its consumers and which is engaged in serving its own members rather than the public generally. It is, therefore, not a public utility.

There are states in which it has been held that rural electric cooperatives are public utilities, despite the fact that they are not organized to serve the public generally. These rulings seem to be fallacious, but it is not necessary to discuss them here. The basic points remain unchanged —namely, that the rural electric cooperative is a non-profit organization, privately owned by its member-consumers. As a non-profit organization, it is analogous to the public body. Because its owners are also its consumers, the same analogy holds. And because of this, it is not possible for the cooperative to overcharge its consumers. Therefore, regulation is not needed.

Although the situation varies greatly, the rural electric cooperative also differs from a true public utility in many places because it is not given a protected monopoly position. It is protected as to the area which it serves in some states, but in other states it is not so protected. In the latter places, it may sometimes be able to obtain the assistance of the state public service body to prevent its territory from being invaded and its consumers taken away. But there are places where even this assistance is not available to it and it must fight the invasion as best it can, just as someone in the free enterprise field. Thus it is that in the electric distribution field only the rural electric cooperative operates subject to either of the requirements for a free enterprise. Only the cooperative is subject to competitive attack.

Wagner replacement core and coils come ready to install in your old tanks...

fully tested....thoroughly dried....packed in oil!

Obsolete or burned-out transformers needn't be consigned to the scrap heap. With Wagner Form W Core and Coil Replacement Assemblies, these transformers can be made good as new again... *and up-rated at the same time* because the new preformed cores are considerably smaller than the old cores. These packaged replacement core and coil assemblies are factory-new elements, exactly like those used in new Wagner Transformers.

They come to you fully dried and tested—ready for use—protected in a sealed container filled with Wagner 7-NI inhibited transformer oil which you may also use in your tank. They are available in ratings from 3 through 167 kva.

Installation is easy... the assemblies are complete with terminal board or tap changer, with leads ready to install in your tank. Each assembly has a new serial number and name plate.

Wagner Bushing Assemblies

High Voltage Bushing Assembly

Available in cover-mounted or tank wall mounted types to meet a wide range of requirements. Gasket, solderless connector-type terminal and clamping devices are included—fuses can be furnished when specified.

Low Voltage Bushing Assembly

Ready to install—includes porcelain bushing, gasket, solderless connector-type terminal and clamping device.

Field Repair Service for Substation Transformers

Wagner's Transformer Service Trucks—completely equipped for field repairs—each with the services of an expert—are available on schedule in most localities. The cost of this exclusive Wagner service is nominal—write for information.

WAGNER ELECTRIC CORPORATION
6390 Plymouth Ave., St. Louis 14, Mo., U.S.A.

Wagner Electric Corporation
EST. WE 1891

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES
AUTOMOTIVE BRAKE SYSTEMS – AIR AND HYDRAULIC

BRANCHES IN 32 PRINCIPAL CITIES

TS56-I

Cut interference, save air time, multiply radio usefulness with new General Electric Personal Channel selective calling systems

New Progress Line Personal Channel Systems provide two-way radio users with individual calling, automatic recall or "leave a call"—make possible group calling with personal communication between dispatcher and driver after the call is placed.

Your two-way radio dispatcher can call or signal your drivers individually, with a new G-E Personal Channel selective calling system. He pre-selects the individual driver to be called or signalled by means of push buttons. Transmissions, with or without the electronic tones which provide the individual calling or signalling function, are made by pushing either of two push bars on a desk console.

With G-E Personal Channel individual calling built into two-way radio systems, dispatchers can call each driver—drivers need hear only calls beamed to them. Away from vehicles, drivers may automatically be recalled to the radio by a flashing light or sounding horn. If beyond range of the recall message, a signal automatically remains lighted on the radio control unit until the call is answered.

With a fleet equipped with Personal Channel group calling, drivers hear only calls from their own dispatcher. When the individual called answers the dispatcher, conversations then may become private.

New Progress Line Personal Channel Systems, for individual or group calling, effectively eliminate most of the nuisance interference due to crowded channel conditions. Both systems virtually eliminate bothersome "skip" interference from distant stations.

Present users of G-E all-electronic selective calling systems report increases up to one-third in useful air time. The ability to recall, or "leave a call", saves air time previously wasted when dispatchers repeated calls for drivers away from their vehicles.

NEW DEPENDABILITY

New G-E Personal Channel Selective Calling Systems now provide the highest possible reliability of operation. A new, simplified, electronic tone receiver selects proper tones in a more exacting manner than ever before. Limits within which the receiver will accept proper tones are dependent upon BOTH amplitude and frequency. The tones accepted must have the right amplitude as well as the right frequency.

Operating ranges of present two-way radio systems are not impaired by the addition of Personal Channel Selective Calling Systems.

All Personal Channel equipment can be incorporated within a single Progress Line mobile unit case, with the same cost-saving, interchangeable plug-in chassis feature provided in all Progress Line equipment.

Your General Electric Communications Counselor is ready now to recommend the G-E Personal Channel two-way radio system which will best serve you. For more information call him, or write: *General Electric Company, Communication Equipment, Section X2146, Electronics Park, Syracuse, New York.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

CALENDAR OF MEETINGS

7th Annual REA Electric Generating Plant Operation and Maintenance Conference
April 2-5
Melbourne Hotel, St. Louis, Mo.

Wisconsin Electric Cooperative
April 4-6
Loraine Hotel, Madison, Wis.

Pennsylvania Rural Electric Association
April 19
Penn Alto Hotel, Altoona, Pa.

Midwest Power Accounting Association
May 23-25
Hotel Leamington, Minneapolis, Minn.

Ohio Rural Electric Cooperatives
August 13-14
Neil House, Columbus, Ohio

Association of Illinois Electric Cooperatives
September 6-7
St. Nicholas Hotel, Springfield, Ill.

Schedule of NRECA Management Institutes

Atlanta, Ga. (Henry Grady Hotel)
April 16-17. IB

Macon, Ga. (Dempsey Hotel)
April 18-19. IB

Washington, D. C. (Willard Hotel)
June 11-16. III and IV

Minneapolis, Minn. (Nicollet Hotel)
June 18-23. III and IV

Springfield, Mo. (Colonial Hotel)
June 25-30, III and IV

Estes Park, Colo. (Elkhorn Lodge)
July 9-14, I and II
July 16-21, III and IV

Spokane, Wash. (Ridpath Hotel)
July 23-28. III and IV

Des Moines, Ia. (Savery Hotel)
August 6-11. III and IV

Cumberland Falls State Park, Ky.
August 13-18. III and IV

IB Institute: A special NRECA Management Institute for directors which deals mainly with board-manager relations and the role of the board in policy formulation, planning, and wage and salary administration.

III Institute: Three-day institute on direction, motivation, and human relations. Primarily for managers and key employees.

IV Institute: Three-day institute on consultative management and communications. Primarily for managers and key employees.

Snowmobile Is Co-op Winter Workhorse

"Workhorse of the northern rural electrics" in South Dakota is the apt title given to the snowmobile. With either skis or wheels on front, and tracks similar to a caterpillar reaching from the middle to the back, this buggy really "eats" snowbanks.

Primarily the vehicle is used for working on lines during the winter months, when snow and ice make using trucks extremely hazardous. Because of the maneuverability of the snowmobiles they are sometimes used as ambulances.

According to Virgil Hanlon, manager of East River Electric Co-op, the snowmobile might not look like a stork, but many times these ungainly vehicles have aided the stork when a farm family was snowed-in, and a rush trip to the hospital was necessary. Occasionally, rather than bring the patient to the hospital, the snowmobile is used to take the doctor to the patient.

Hanlon said that East River Electric employees are trained in first aid and are on 24-hour call for aid during snowstorms. The East River snowmobile is equipped with a stretcher, donated by the local Red Cross, and has been used several times for emergency sick calls.

"A Madison, S. Dak., doctor credited the snowmobile operators with saving the life of a rural farm woman recently, and many similar cases can be cited for rural electric co-ops in South Dakota," said Hanlon.

Educator Declares Co-ops "Free Private Enterprise"

Members of Crawford Electric Co-op at Gays Mills, Wis., heard John E. TePoorten, co-ordinator of vocation and adult education for Wisconsin schools, declare that co-ops have a firm and honorable place in the American system of free enterprise.

But, he told the several hundred members attending the co-op's annual meeting, the co-ops in the United States are under constant attack from groups "with an axe to grind."

In his strong defense of cooperatives, TePoorten said: "For some reason or another, certain people in this country try to keep the co-ops out of any discussion on free private enterprise. I am sure that everyone in this audience is in favor of free private enterprise. I am also sure that you agree with me that there is a vast difference when you take away the word 'free' and we would not be in favor of private enterprise, if it got so private that we couldn't get into it."

TePoorten added that the attempt toward monopolistic control in the utility field is a good example of private enterprise vs. free competitive enterprise.

Theoretically, he said, "the first cooperative in the United States was the government, formed not for profit, but for mutual protection, mutual benefit, and service to one another."

TePoorten added that the excellent record of service of rural electric co-ops is an indictment of the private utilities who said electrification of the rural areas of America couldn't be done.

He went on to say that the foes of co-ops are using the "insidious method" of repeating falsehoods over and over because they are unable to prove any of their charges.

These attacks, he said, might be directed against the electric co-ops because the private utilities would like to take over the co-ops and change their policy from one of service to one of profit.

WATER SYSTEMS

(*Continued from page* 29)

water under pressure for better living, better farming.

Displaying the official poster in the co-op reception room or using it as a backdrop for an exhibit, showing the water system and the various electrical appliances it supplies will also lend support to the promotion.

The new folder entitled "Beyond the Water Mains: A Guide to Planning a Modern Electric Water System," could be effective as a mailing piece or as hand-out literature. Included in it are details of what must be considered in obtaining the maximum enjoyment and convenience from the two basic utilities in home planning—electric power and running water under pressure. The posters and folders are available from water systems distributors.

For further assistance in planning an effective, resultful tie-in with National Water Systems Month is a special promotional kit for power suppliers, containing, among other things, copy for one-minute radio spot announcements as well as a script for a 15-minute radio interview.

Remember, increased power and pump sales go hand-in-hand, and close cooperation between the water systems industry and rural electric co-ops will greatly benefit both.

HIGHWAY *Still The Leader*
In Utility and Construction Equipment

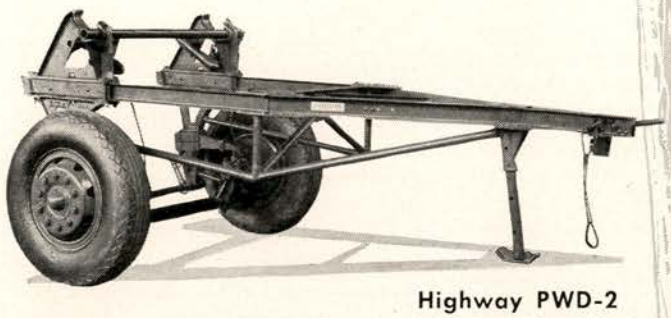
At Highway, utility equipment is designed, engineered and built for safe, dependable performance . . . specifically for the job required . . . and for long, trouble-free service life at low operating cost. A strict program of quality control has earned Highway the reputation as the leader in every detail of advanced utility equipment production.

What are *your* needs or requirements in line construction and maintenance equipment? Let us show you how Highway's design, engineering and extensive production facilities can solve your problems.

Highway MW-128 Utility Truck Body

Highway heavy-duty HC Earth-Boring Machine

HIGHWAY



Highway PWD-2 Cable Reel Trailer

Highway IU-76 Installer's Unit

Highway PWD-2 Cable Reel Trailer is designed for quick, easy loading and transport of heavy cable reels up to 48" wide. Like other Highway utility trailers, it handles its load safely and steadily, even at high speeds on the road.

Highway MW-128 Utility Truck Body carries a full crew to the job with all necessary materials and equipment, on a standard truck chassis. Highway builds a full line of utility bodies for general and special service.

Highway IU-76 Installer's Unit is a specialized body for mounting on a half-ton truck. Scientifically arranged equipment compartments and tool carriers at sides and rear put all needed tools and materials within arm's reach.

Highway heavy-duty HC Earth-Boring Machine digs holes 9 to 36 inches in diameter, up to 10 feet deep in any soil. Portable, tractor-mounted, and self-powered models are also available.

HIGHWAY TRAILER CO.

HEADQUARTERS • EDGERTON, WISCONSIN

MANUFACTURERS OF

Utility Truck Bodies • Earth-Boring Machines • Pole and Cable Reel Trailers • Winches • Power Take-Offs • Service Accessories • Commercial Trailers • Trailerized Tanks • Dry Bulk Haulers

SALES AND SERVICE IN PRINCIPAL CITIES

S. Dak. Co-op Man Of The Year

The recent South Dakota Rural Electric Association annual meeting honored Sam K. Ulrikson, Canton farmer, as "Man of the Year."

Ulrikson, long active in the rural electric program in South Dakota, has served as an official of three rural electric groups. He was a director, vice president and president of Lincoln-Union Electric; director of East River Electric Power Co-op; director and former vice president of the South Dakota Rural Electric Association.

The "Man of the Year" is a lifelong resident of Lincoln County and lives on a farm that his grandfather homesteaded in the 1870's. Until his retirement in 1946 Ulrikson operated about 720 acres of farm land.

Besides being a leader in the rural electric field, Ulrikson is well known for his work in the church, the field of soil conservation, president of the South Dakota Association of Cooperatives, and chairman of the board of Canton Co-op Creamery.

He is the fourth man in the state to receive the award given by SDREA.

SPA RATES

(*Continued from page* 14)

to the 18-month postponement Kerr said that many Senators and Congressmen are supporting legislation to postpone any electric power rate increase to SPA-area farmers, who are already hamstrung by the cost price squeeze and two years of extreme drought conditions.

Aandahl has been called to testify three times since the inquiry began. Kerr, questioning Aandahl on the discount provisions for rural electrics under the new SPA rates, established that discount provisions provided for rural electric cooperatives could not be readily obtained by them.

Aandahl stated that the increased SPA rate of 7.71 mills would apply to all of SPA's customers. Later, he modified this statement when Kerr revealed that the 7.71 applied only to rural electrics and municipalities in the SPA area, and that SPA's non-preference customers in each instance have a rate lower than the 7.71 mills per kwh charged to preference customers.

Kerr contended that all the power from the seven Federal projects in the Southwest area goes to power companies as peaking power. In exchange for the peaking power, the commercial power companies deliver firm power to the rural electrics and other preference customers. Kerr sought to develop the fact that the rate SPA received for peaking power is not commensurate with the rate that the power companies charge for the firm power delivered to preference customers.

Aandahl testified that the power companies retained 1.65 kwh of SPA power for each one kwh of power delivered to preference customers. Additionally, they received 1.25 mills per kilowatt hour for wheeling power to co-ops and preference customers.

Senators Francis Case (S. Dak.), James Murray (Mont.) and Richard Neuberger (Oreg.) questioned Aandahl about rate increases in the Missouri River Basin and Bonneville Power Administration areas.

Aandahl answered that at present there is "no indication" that a power rate increase for the areas would come within the next year. However, in 1953 Aandahl warned Federal power customers in the Missouri Basin that a rate increase was in prospect, and Bonneville Power Administrator William Pearl in his recent annual report stated that BPA's rates would remain at the same level for only one year.

Neuberger questioned Aandahl extensively about the Administration's "partnership" policy, which the Senator declared is damaging the economy of the Pacific Northwest states.

Aandahl defended the "partnership" policy and pointed to progress at Hells Canyon, Mountain Sheep and Pleasant Valley sites on the Snake and Salmon Rivers. Neuberger declared that there "was not a partnership" relationship to the first three dams Aandahl mentioned, rather they are proposed privately-owned projects.

Aandahl replied that in his overall "broad concept of partnership" that the Administration's partnership policies include private projects such as the Idaho Power Company's three small dams in the Hells Canyon section of the Snake River.

The Kerr inquiry has gradually developed information indicating that Aandahl's policy of inflating power costs in the Southwest is not restricted to the Southwest, but extends to Federal power projects throughout the entire country.

The Missouri Basin projects seem likely to be the next to face inflated power cost allocations, according to consensus, and there is an existing threat in the Bonneville Power area, according to rural electric leaders. It was also pointed out that the projects in the Southeastern Power Administration area are currently losing money because of the Administration's failure to adhere to Federal preference laws, and that costs there may be inflated with a new allocation method.

Another significant development became evident during the Kerr hearings. Interior seeks to have the Federal investment returned to the Treasury, with interest, within 50 years.

Engineers have testified, however, that the dependable life expectancy of the projects is closer to 500 years than just 50 years, regardless of replacement costs which are incidental to total cost.

At present the hearings are being kept open for interested parties to submit statements for the record. It is also expected that Dr. Henry Blalock, former SPA executive, now a consultant to several Southwest generation and transmission co-ops, will be called to testify before the conclusion of the inquiry.

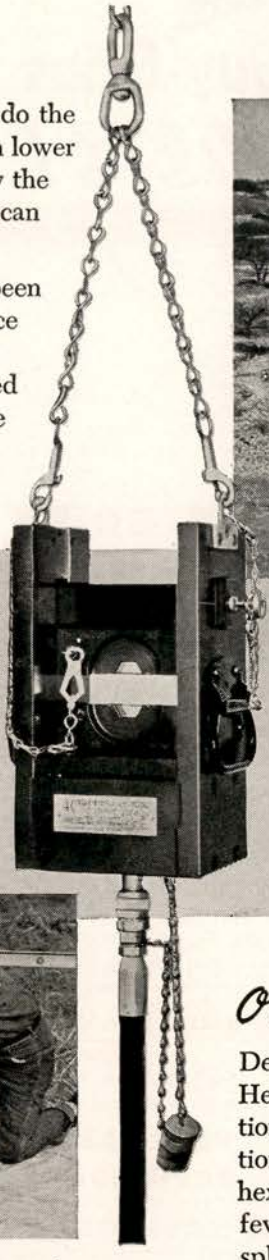
"Hmmmm! They're damming up our creek, Myrt—need new power sources."

Now *ONE* portable tool makes transmission line splices

OVERHEAD

It's no longer necessary for linemen to do the sagging and marking overhead and then lower the line to the ground for splicing. Now the complete operation, including splicing, can be performed overhead.

T&B's Forty-Ton Hydraulic Head has been specially designed for heavy-duty service in building transmission lines. Since it weighs only 36 pounds, this factory-rigged tool can be put into operation anywhere a man can throw a rope. Safety chains keep all removable parts from falling to the ground.



T&B's Forty-Ton Hydraulic Head, Cat. No. 21940, specially designed for transmission line building.

or ON THE GROUND

Demountable legs hold T&B's Forty-Ton Hydraulic Head at convenient working height when installations are being made on the ground. During operation, hardened steel dies compress fitting and cable hexagonally into one homogeneous mass . . . all in a few seconds. The same die set installs tension splicers, dead ends, loop splicers and taps, tees and terminals.

Modern hydraulic design has virtually eliminated the need for maintenance. However, field maintenance is simple and practical. The 21940 Installing Head can be completely disassembled and reassembled in less than one-half hour with these common tools: screw driver, Allen wrench, and mallet.

T&B Bulletin 70 gives a detailed description of the Forty-Ton Hydraulic Head as well as complete lines of T&B connectors, tools, and accessories for transmission line building. Send for FREE copy.

LOOK FOR THIS SIGN —

AUTHORIZED DISTRIBUTOR T&B ENGINEERED

IT'S THE MARK OF AN AUTHORIZED T & B DISTRIBUTOR

The complete line of T & B fittings for conductors and raceways is sold only by recognized electrical wholesalers. It's our way of assuring you the service and savings of a friendly local source. Call him for all your electrical needs. T-418

THE THOMAS & BETTS CO.

INCORPORATED

78 Butler Street • Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

Maryland Senator Says Americanism Electrified Farms

Rural Electrification Hailed as Outstanding Success Story

"The rural electrification program has been one of the greatest success stories of all economic history," Maryland State Senator Lewis Goldstein told the annual meeting of the Choptank Electric Cooperative at Denton, Md., recently.

Goldstein, who is president of the Maryland Senate, is also a leader of a drive for comprehensive development of the Potomac River Basin.

Crediting the amazing success of the rural electrification program to American tradition, Goldstein said, "It is all the more to your credit when you consider the fact that you have to pay so much for electricity — between 12 and 13 mills on the average. . . . In Virginia, the rural electric systems purchase for between 6 and 8 mills, primarily because they have benefit from Federal power generated at the new John Kerr Dam.

"I hope you can some day get cheaper power," he said. "The history of the electric utility business has proven that high costs of electricity definitely retard its use, and therefore retard economic development."

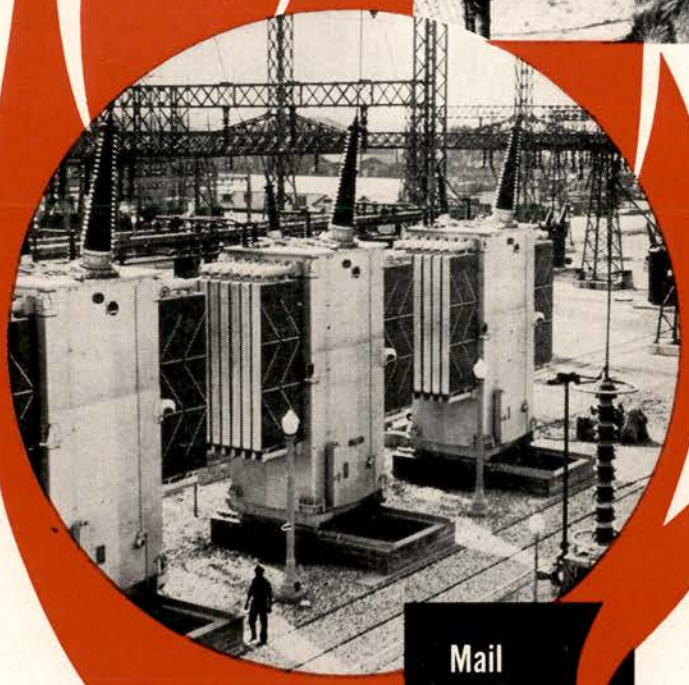
Meantime, Goldstein urged Maryland citizens to renew their efforts for comprehensive development of the Potomac River Basin, according to specifications outlined in a report by the Army Corps of Engineers in the late 1930's. Speaking before a citizens' group interested in future locations of the Potomac Electric Power Company's facilities, Goldstein said that Maryland could benefit from the same low electric power rates that John Kerr Dam provides Virginia, if the potential of the Potomac River is developed.

One of the original sponsors of the Maryland Rural Electrification Act of 1941, Goldstein declared that Choptank means more than $20-million in business to Main Street in the various towns in eastern Maryland.

In addition to the $40,000 tax payment by Choptank last year, the state Senator said, ". . . having electricity on the farms has increased farm income and has increased the value of farm property, thereby making an important indirect contribution to tax revenues available for the support of schools, roads and other essential expenses of local government."

PROTECT YOUR PROPERTY AGAINST GRASS FIRES!

here are two good ways to destroy fire-hazardous weeds and grasses...



Mail this coupon

You have a choice of either spraying, or applying a granular weed killer which goes on dry. By either method you can destroy most weeds and grasses *and prevent regrowth* for a full season or longer! Choose one of these two popular weed killers for keeping *your* grounds free of unsightly, hazardous weeds.

UREABOR* WEED KILLER

For DRY application; there is nothing to mix... no water to haul. UREABOR is always ready for use in its delivered form; gives full season control of most weeds and grasses. It is so powerful that only 1 to 2 lbs. per 100 sq. ft. is effective, yet safe. For most efficient distribution of UREABOR at low rates, we recommend the PCB Spreader. Available for just $10.75 delivered – anywhere in the U.S.A.

**Trade-mark of B.C.L.*

POLYBOR-CHLORATE®

Apply this weed killer as a spray, or dry. Spraying gives quick knockdown to tall standing vegetation... kills topgrowth... attacks roots. Remains in soil to prevent regrowth for as long as two years. Although this herbicide is a combination of sodium borates and sodium chlorate, it is nonflammable and nonpoisonous when used as directed.

✓ *Check these features:*

- **EASY TO APPLY... AND SAFE**
- **RESULTS ARE LONG-LASTING**
- **NONSELECTIVE • NONPOISONOUS**
- **NON FIRE-HAZARDOUS**
- **NONCORROSIVE to ferrous metals**

AGRICULTURAL SALES DIVISION

PACIFIC COAST BORAX CO.

DIVISION OF BORAX CONSOLIDATED, LIMITED

630 SHATTO PLACE, LOS ANGELES 5, CALIFORNIA

Please send literature to:

NAME_____

COMPANY_____

ADDRESS_____

CITY & STATE_____

CONGRESS

(*Continued from page* 19)

has proposed a multitude of amendments to the TVA staff version which would obliterate TVA.

Authorization for six Federal atomic power plants is contained in proposed legislation written by Sen. Albert Gore (Tenn.). Rural electric leaders have endorsed the Gore bill, and also expanded it somewhat. They have asked that a minimum of six Federal atomic power plants be constructed, but recommended construction of ten such plants.

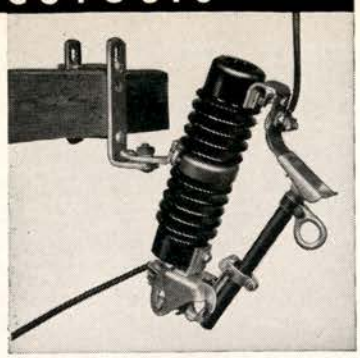
Rural electric leaders have specified that the Tennessee Valley and the Pacific Northwest, both facing power shortages, be selected as sites for two of the plants. However, the Joint Committee on Atomic Energy has indicated little interest in conducting hearings on the Gore bill.

There is a fifth situation existing only in the Senate that possibly raises questions regarding the behavior of some Senators. That is the stalled investigation of corrupt lobbying practices, an outgrowth of the natural gas lobby's peddling campaign contributions to influence the outcome of the vote on the Natural Gas Act.

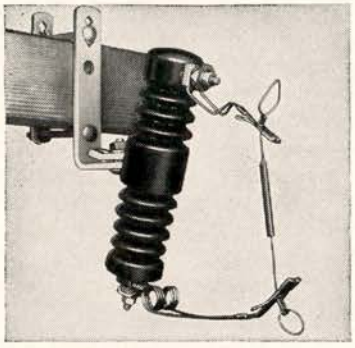
Instead of letting the investigation fall within the jurisdiction of the normal standing Senate committee for investigation, a Select Committee was appointed with four Senators from each party. Clever backstage maneuvering rendered the Select Committee immovable, and frustrated Sen. Albert Gore (Tenn.), who was in line to chairman the committee, to the extent that he withdrew from consideration as chairman in the interests of getting the investigation underway.

Sen. John McClellan (Ark.), has been elected chairman of the committee, but the committee is still not off the ground and there is considerable speculation as to whether it ever will get underway. McClellan is still accepting and interviewing applicants for the general counsel's job. The Select Committee, incidentally, is only the fourth such committee in the past 24 years of history in the Senate.

It is becoming increasingly apparent that the second session of the 84th Congress will be motivated only by campaign contributions or the threat of loss of votes from constituents. Unless rural electric leaders can present evidence to Congress that an impressive legislative record and issues far exceed the importance of campaign contributions, it appears that a "bi-partisan do-nothing" tag can be hung on the 84th Congress.



OPEN DROPOUT cutout has interchangeable fuse holders, full-range arc interruption, time delay action. Ratings: 7.8- and 15-kv, 100 amp. GEA-1816.



FLIP-OPEN cutout provides the most economical overcurrent protection possible where fault currents are under 1200 amperes. Bulletin GEA-4224.

HERE'S EVERYTHING YOUR SYSTEM NEEDS FOR ECONOMICAL PROTECTION

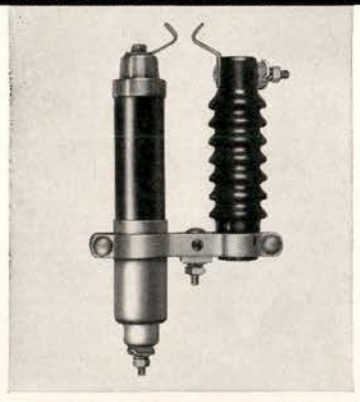
Select from G.E.'s low-cost family of protective devices, especially designed for rural lines

Damage and outages caused by lightning and overcurrents can be expensive headaches on rural systems. As a solution to this problem, General Electric offers a whole family of cutouts and arresters, specifically designed to give adequate and economical protection on rural lines. For a comparatively minor investment, this equipment can drastically reduce both apparatus damage and system outages. For the whole story on these economical, dependable G-E protective devices, write for your copies of the bulletins listed. General Electric Company, Section 432-15, Schenectady 5, New York.

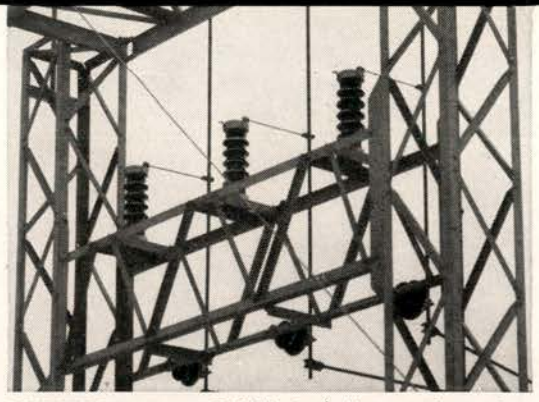
Progress Is Our Most Important Product

GENERAL ELECTRIC

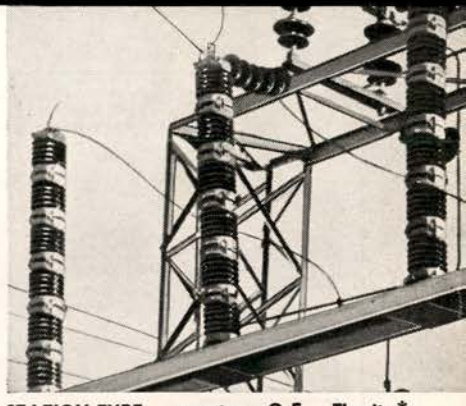
ARRESTERS



HI-STROKE RURAL arrester is heavy-duty expulsion type featuring low-impulse sparkover and high discharge capacity for long life. GEA-4582.



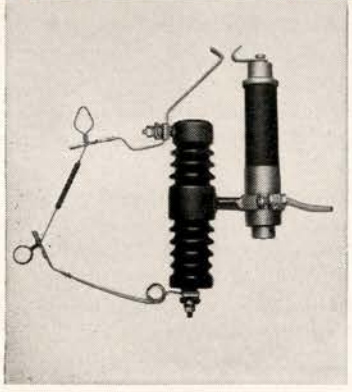
LINE-TYPE arrester—G-E Thyrite* Magne-valve action affords protection for small substations. It's low in cost, small in size, but exceptionally high in protective efficiency. Bulletin GEA-2978.



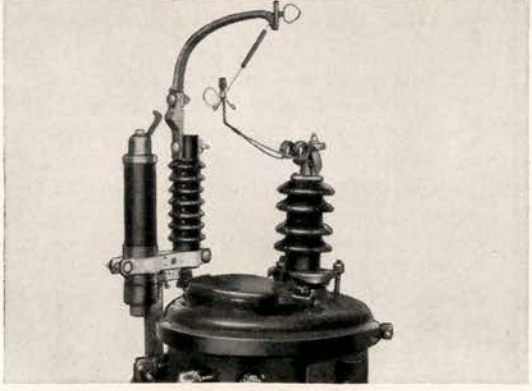
STATION-TYPE arrester—G-E Thyrite* Magne-valve action offers 20% greater protection and 3 times greater endurance, even under 150,000-amp strokes. GEA-1304.

*Registered trade mark of General Electric Co.

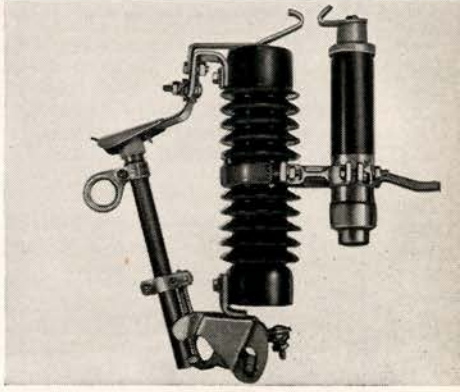
COMBINATIONS



HI-STROKE FLIP-OPEN combination gives the lowest first cost for transformer protection on 7200/12470-volt grounded Y rural systems. GEA-4224.



HI-STROKE FLIP-OPEN combination can be mounted directly on REA transformer tanks for low-cost unit assembly. It results in a compact unit for pole mounting. Bulletin GEA-4224.



HI-STROKE OPEN DROPOUT combination features "birdproof" construction. Separate external series gap prevents leakage and line lockout. GEA-1816.

POLE TESTING

(*Continued from page* 21)

southern yellow pine poles were tested to compare the two standard test methods. Altogether, there have been tested some 306 full-size poles and several thousand matched clear specimens. The remainder of the program covers the study of poles that have been pressure treated with wood preservatives, and the overall analysis and integration of all the data as a basis for revising specifications and establishing strength classes.

Although specific recommendations regarding changes in specifications and fiber stress ratings for pole species must await the completion of the study, interim reports with detailed data from the tests are issued to all contributors and committee members as the work progresses. Reports on untreated larch, Douglas fir, and southern pine poles have already been distributed. Reports on untreated lodgepole pine and western red cedar poles and the report covering a comparison of the machine and crib methods of test are nearing completion and will be issued within the next few months.

For example, the relation of strength to specific gravity in poles has suggested the possibility of an improved method of selection of poles for strength. A field method of determining specific gravity from increment borings has proved to be rapid and reasonably accurate. It is possible that such a method could be applied to poles in commercial production. The increased selectivity of strength obtainable in this way would permit higher stresses on the stronger poles without sacrificing any of the factors of safety needed.

A possible alternative, in species like southern pine and Douglas fir, is by the application of the "density rule" that has been used successfully for many years with structural lumber. The "density rule" is based on a visual inspection of the end of a pole and involves estimating the proportion of the dense summerwood in the annual growth rings and observing the tree's rate of growth. Preliminary analysis of the test data indicates that it would be practical for poles also.

Data on the effects of natural characteristics, such as knots and cross grain, on the strength of wood poles are being accumulated. It has been found, for example, that knots in the upper portion of the length of a transmission pole have little or no effect on its strength. Studies of poles with spiral grain show that its effect on strength is much less in a pole than in a cut structural timber.

Some of the technical questions raised in the program are still open. More needs to be learned of the effect of the seasoning of poles on their strength. Poles in the test program have been in the green condition for closer comparison among species; at the same time, it is recognized that poles in service may receive a considerable amount of seasoning above the groundline. This is particularly important in a species like lodgepole pine, which is generally used in the drier climates. Additional work correlated with the ASTM Wood Pole Research Program has been suggested.

The selection of test poles for treatment is now going forward. Southern pine and Douglas fir poles have been selected and treated. Tests are already underway on some of the test material that has been received at the Forest Products Laboratory. Plans for the selection of poles for treatment in other species are being developed.

All concerned with poles — producers, treaters, and users—may expect to realize advantages from the results of the ASTM Wood Pole Research Program. It is, of course, too early as yet to predict the results of the test program, but some of the possibilities have been mentioned.

Challenging Possibility

Particularly challenging is the possibility of selecting poles by density, if found to be practical, as an efficient method of establishing higher stresses on the stronger poles without sacrificing any of the factor of safety needed in the weaker poles. Also, data on the effects of knots and cross grain may permit relaxing requirements on such natural characteristics without sacrificing strength. Certainly a more consistent set of stresses for the various species will result and will permit design of transmission lines with more confidence.

It is difficult to evaluate the dollar-wise effect of such factors as are indicated above. However, if reduced sizes, reduced shipping costs, lowered costs of preservative treatment, and the like were to result in a saving of only 50 cents per pole, the annual saving to the pole users would total more than $3-million based on the average annual production of about 6,400,000 poles over the 1946-51 period.

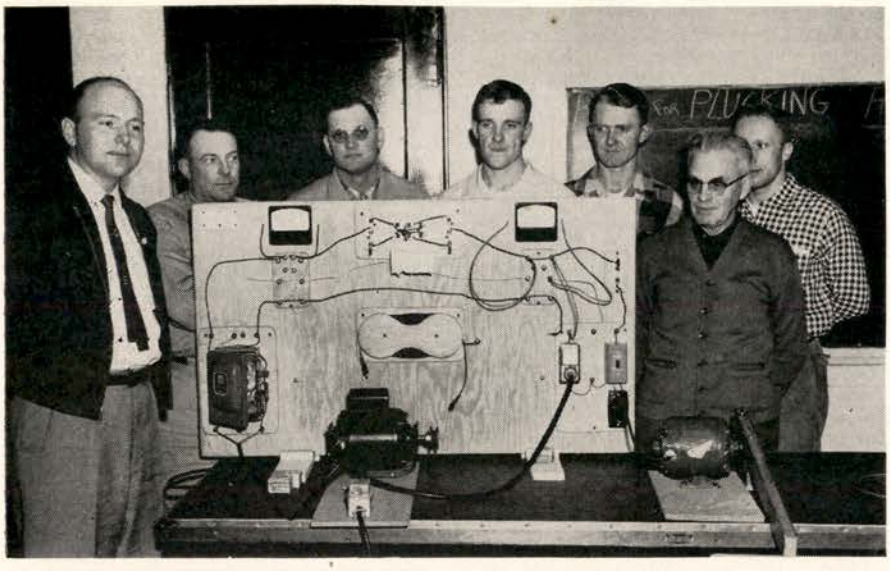
What's Ahead

The magniture of the program is evidenced by its cost, estimated at $254,000. Obviously, a project of this scope could not be undertaken by any one organization. Rather, it has been developed on the basis of contributions from a great number of interested individuals, producers, treaters, utilities, organizations, agencies and others having an interest in the program. About two-thirds of the cost has already been subscribed.

Rural electric co-op officials have a standing cordial invitation to visit the Forest Products Laboratory at Madison, where the research is being conducted, and witness the tests at any time.

A final report on the work will be prepared when all the tests are completed. The results will then serve as a basis for the revision of present specification requirements. We know the program will provide more reliable strength data for the more efficient design of pole installations. We are confident that by more efficient use of poles, significant savings in cost and maintenance will be effected.

Nodak Donates Demonstration Panels



Nodak Rural Electric Co-op, Grand Forks, N. Dak., recently donated electrical demonstration boards to the vocational agriculture departments of seven local high schools. Members of one of the area farmers' classes (above), find the demonstration panel helpful in reviewing such phases of fundamental electricity as electrical circuits and the effect of overloaded circuits on appliances and lights.

WIRING

(*Continued from page* 24)

freeing the co-op from liability and after agreeing to correct hazards discovered. Our advice is for the best interest of the member, and therefore we always have his voluntary support before entering his premises.

What about load building? Our average yearly farm use has increased from about 5,100 kwh in 1954 to 5,364 kwh in 1955. We do not merchandise, we sponsor no dealers, but when tailoring the rewiring of an old system, our men must spend time enough to discuss possible future use of appliances and labor saving equipment and explain their benefits. The member will buy when he is ready. We never send a dealer to a "hot prospect" unless the member makes this request. To do so would be to betray a confidence and destroy the confidence of the member for his co-op.

We support our advisors by eliminating all causes for interruption of service or voltage fluctuations promptly so that the members will not hesitate before buying a new labor saver because of doubt of the service. Our line testing laboratory immediately detects poor voltage regulation or any condition that may detract from ample line capacity and our crew corrects this defect at once.

We believe our system is working because of the high usage and because of high saturation of major electric uses. For instance, 76% of our users have water systems, 56% have ranges and water heaters, 96% have refrigerators, 84% have television sets, 50% have home freezers, 22% automatic washers, 30% milking machines, 28% chick brooders, 20% grain elevators, and 19% milk coolers.

Our belief is that the emphasis on the member is fundamental in a cooperative member-owned organization that expects to operate under the recognized principles for cooperatives.

Our co-op advisors, when planning with the member for his needs and again when furnishing strict and expert inspection of the finished job, have built a confidence and respect by the member for his cooperative that we believe will insure the lasting success of our rural electric system.

CLASSIFIED and PROFESSIONAL ADVERTISING

Rates for advertising in these columns by engineers, contractors, rural electric systems which are **not** members of NRECA and others are:

Classified Advertising	Per word
First 50 words	20c
Additional words	10c
Minimum charge—$2.50	

Situations Wanted (no minimum) 10c

Professional Cards (engineers, contractors)

Less than 12 inches within one year	$8.00 per inch
12 inches or more within one year	$7.00 per inch

Members of NRECA wanting to buy, sell, exchange, offer employment or to advertise other goods or services in these columns may do so **free** as a service of their National Association.

Closing date for May issue is April 20.

HELP WANTED

DISTRIBUTION ENGINEER—Graduate electrical engineer with at least 4 years experience on REA system. Experience in design, operation and maintenance of distribution facilities required. Location in eastern part of country in town of 10,000 population. Reply stating age, education, experience, personal particulars and minimum salary expected. All applications will be held in strict confidence. Address application to Box 602, Rural Electrification magazine, 1303 New Hampshire Avenue, N.W., Washington 6, D. C.

ELECTRICATION ADVISOR — For rural electric cooperative serving approximately 3,700 members on 1,200 miles of line. Duties to consist of advisory service in selection, care, and use of all type electrical equipment; on wiring installations for farm, home, and commercial establishments; preparation of monthly newsletter; coordinating power use program with members, dealers, distributors, and wiring contractors; work with cooperative members, associated farm worker personnel, such as extension service and vo-ag, etc., community clubs, youth groups, and general public in promoting cooperative principles and power use program. Applicant must have qualifications to fullfill the above duties. Prefer person with farm background. Degree in agricultural or electrical engineering desirable. Office located in town with 3,000 population, good churches, schools, doctors, and hospital. Vacation, sick leave, employee insurance program available. Write giving full particulars as to qualifications and expected starting salary. Advancement possible for right party. Dixie Electric Cooperative, P. O. Box 30, Union Springs, Ala.

HOME ECONOMIST—with journalism background for large Virginia co-op serving 15,000 consumers. Salary is open, depending upon qualifications. Those interested should write Charles S. Hooper, Jr., manager, Southside Electric Cooperative, Crewe, Va.

MANAGER—Administrative ability and utility experience necessary. Permanent position carrying substantial opportunity for qualified person. Retirement plan in effect. Replies confidential. Apply Northeast Mississippi Electric Power Assn., W. P. Good, president, P. O. Box 591, Oxford, Miss.

HELP WANTED (Continued)

MANAGER — For rural electric system serving 2,000 members; 730 miles of line. Must have experience in administration, ability to achieve and maintain efficient operation, and develop and carry out sound expansion program including power use. Give full details in first letter. Application blanks available from Phillip N. Sanchez, secretary, Mora-San Miguel Electric Co-op, Mora, N. Mex.

MANAGER—for progressive telephone cooperative system located in west central section of Wisconsin. Expect 700 stations on conversion of three dial offices. Excellent rural areas convenient to large cities. Applicant must qualify for complete management, have sound telephone background and ability to promote system growth and business security. Excellent chance for advancement. For application forms please write Harold Kreutzer, president, West Wisconsin Telephone Cooperative, Box 142, Menomonie, Wis.

OFFICE MANAGER — with complete REA bookkeeping experience and ability to handle public relations. Must know work order procedure. Applicant should give experience record, age, references and expected salary. Address applications to: Kit Carson Electric Cooperative, Taos, N. Mex.

WORK ORDER CLERK—Experienced work order clerk, preferably with a general knowledge of REA accounting, or an experienced REA bookkeeper with a knowledge of work order procedure. Position now open with good starting salary. Cooperative office located in Rio Grande Valley, Northern New Mexico, Village of Espanola. Co-op serves 5,600 members. For further details contact Jemez Mountains Electric Co-op. Box 807, Espanola, N. Mex. Phone 4255 or 4265.

SITUATIONS WANTED

ELECTRICAL ENGINEER — with 20 years' experience. First seven years of this experience with public utilities and the past 13 years with REA borrowers or consulting engineers working for REA borrowers and the past seven years as REA Field Engineer. Engineering experience includes all fields of engineering related to REA systems. Consider your needs for my services as we can function as manager, engineer, line superintendent or power use advisor. Salary left open for discussion at a later date. Box 800, RURAL ELECTRIFICATION MAGAZINE, 1303 New Hampshire Ave., N.W., Washington 6, D. C.

MANAGER OR ASSISTANT MANAGER—Age 34, family, community activities, rural background. B.S., M.S., Chem. Eng. Now Senior Engineer, large manufacturing organization. Present salary $8,300. Write Box 401, RURAL ELECTRIFICATION magazine, 1303 New Hampshire Ave., N.W., Washington 6, D. C.

SITUATIONS WANTED (Cont.)

MANAGER—Ten years' experience in all phases of cooperative operation including engineering, construction, maintenance, customer relations, customer billing and management. Excellent record in load building. Best of references. Write Box 202, RURAL ELECTRIFICATION MAGAZINE, 1303 New Hampshire Ave., N. W., Washington 6, D. C.

RESPONSIBLE POSITION — family man—ten years' experience in REA includes engineering; planning and organizing all phases of operations; maintenance and construction of rural coops. Capable of following work order procedures. Furnish references on request. Prefer to locate in Midwest or Eastern Rockies. Write Box 301, RURAL ELECTRIFICATION MAGAZINE, 1303 New Hampshire Ave., N. W., Washington 6, D. C.

WANTED TO BUY

GENERATOR SETS—Diesel and electric, all sizes, up to 3000 kw—transformers, all sizes. Benjamin & Jay Corp., 3618 N.W. No. River Dr., Miami, Fla.

MOBILE TRANSMITTER — A good used 6-volt mobile transmitter and receiver on a 37.5 megacycle band in satisfactory working order. In reply state price, type and model. Winnebago Rural Electric Co-op Assn., Thompson, Ia.

TRANSFORMERS—Several dry type small capacity 7200/120/240 distribution transformers. Three 15 kva or 25 kva transformers 7200/550V. Please send name plate data, condition, etc. Dennys River Electric Cooperative, Box 342, Calais, Me.

FOR SALE

ACCOUNTING MACHINE — One Underwood Sundstrand accounting machine, 24" statistical model, with right shelf desk and four extra control plates. This machine has been in use for five years. Make us an offer. People's Cooperative Power Association, Box 1039, Rochester, Minn.

CROSSARMS—240, 5¾ x 7¾ x 20'. Creosote pressure treated. Price $20.96 each, F.O.B., Le Mars, Ia. Northwest Iowa Power Cooperative, P.O. Box 1011, Le-Mars, Ia.

ELLIOTT EQUIPMENT — One Elliott Automatic Addressing Machine, Model 550, like new and in first class condition, complete with attachments and plastic cover. Priced for quick sale at $800, FOB. Also two Smith-Corona stencil typewriters, first class condition, with stencil moisteners. Priced at $85 each, FOB. Write Wisconsin Electric Cooperative, Box 686, Madison 1, Wis.

FOR SALE (Continued)

INDUCTION MOTORS—Make us an offer: Four Burke Electric Company 7½-15 H.P. Induction Motors, Type NAD-364, 220V, 3-phase, 60-cycle, 23.4-36.6 AMP, 880-1745 RPM. Serial nos. 163413, 163415, 163800, 163801. Advise Storekeeper, Cloverland Electric Cooperative, P. O. Box 313, Sault Ste. Marie, Mich.

MATERIALS

200 new ⅝"x6" machine bolts	$16.00c
1,200 new ⅝"x10" machine bolts	20.00c
100 new ⅝"x6" eye bolts	29.05c
700 new ⅝"x12" eye bolts	34.15c
200 new ⅝"x8" thimble eye bolts	33.00c
100 new ⅝"x10" thimble eye bolts	39.00c
400 new ⅝"x8" DDL upsets	28.13c
500 new ⅝"x9" DDL upsets	28.13c
200 new ⅝"x10" DDL upsets	28.13c
1,200 new J6 clevis	31.00c
11,580 lbs. new #6x Amerductor on reels	26.22cw
10,138 lbs. used #6 steel—3 strand—on reels	1.25cw

Write **Nodaway Worth Electric Cooperative, Maryville, Mo.**

METERING OUTFIT — Type P.C.W., Allis-Chalmers metering outfit, three-phase, three-wire—34.5 to 115 volts, 50/100 to 5 volts, complete with demand meter-test block-arrestors-and insulators. Purchased in 1949 and in perfect operating condition. Reasonably priced. Clay-Union Electric Corporation, Vermillion, S. Dak.

11 each, New Shaw-Walker Filing Cabinets, 4-drawer, letter size, steel.
20 each, New Shaw-Walker 4 x 6 Card Size Transfer Files, steel.
4 each, Used Art Metal Filing Cabinets, 4-drawer, letter size, steel.
Choctawhatchee Electric Cooperative, De Funiak Springs, Fla.

SAFE—Remington Rand safe. Two-door, combination lock, inside dimensions 60 x 30 x 20 inches deep. Rated two-hour B fire T-20 burglary. Write Panhandle Rural Electric Membership Assn., Alliance, Nebr.

SCHETKY CHIPPER mounted on trailer, with Chrysler 55 H.P. engine and Fitchburg C-9 chipper. Will cut 6" to 8" wood. Used 200 hours. Inland Power & Light Co., E. 320 Second Ave., Spokane, Wash.

STEAM GENERATOR — One complete heating boiler, 200 HP, weight 15 tons. Fired with #3 fuel oil. Working pressure 100 psi, 807 sq. ft. heating surface. This Ames steam generator is complete with firing equipment and automatic controls. No. E-43043. Cat. No. A200, serial number 56477 complete with Crane outlet valve, Powell B.O. valve, Lonergan pop valves, transformer, switch, wrenches, fuse block regulator, one 10-HP motor, one 1½-HP motor. Unit mounted on steel skid for easy placement. Overall dimensions 16'9" x 8'6" x 9' high. Used one season. Price F.O.B. cars Genoa, Wis., $5,800. Dairyland Power Cooperative, LaCrosse, Wis.

FOR SALE (Continued)

STEAM TURBINE—One Carling Steam Turbine (used as spare for boiler feed pump). Type 20E, 50-HP, RPM 1750, serial number 6423, steam pressure at throttle 650 psi, 8250. Estimated weight 1,000 lb. Manufactured by Carling Turbine Blower Co., Price F.O.B., Genoa, Wis., $200. Inquire at Dairyland Power Cooperative, LaCrosse, Wis.

SUBSTATION TRANSFORMERS — 3 Moloney 333 kva single phase substation transformers. 67.000 to 7200/12,470Y. H.V. Taps 70,350; 68,675; 67,000; 65,325; 63,650. BIL: HV 350 kv, LV 95 kv, Imp. 6.6% Sub-Polarity; complete with standard accessories. Serial No.'s 894393-4-5. In use 5 years. First-class condition. Price $2,160 each. F.O.B. Pima, Ariz. Write Graham County Electric Co-op, Pima, Ariz.

SUBSTATION TRANSFORMERS — 3 General Electric substation transformers, 200 kva, 6.9 kv delta primary, 7.2/12.5 kv Y secondary with low voltage cover bushings; four 2½% taps below 6900 volt primary, complete with standard accessories including thermometer. Serial numbers 7528529, -30 and -31. Price $500 each, f.o.b. Westville, Okla. Write Ozarks Rural Electric Co-op, 200 West Center St., Fayetteville, Ark.

SUBSTATION TRANSFORMERS—3—75 kva Type H, GE; 24000 Volts to 2400/4160, Single Phase, 60 cycle. Serial Numbers 5743621, 22, 23. Cherry-Todd Electric Cooperative, Valentine, Nebr.

SWITCHES—6 Delta Star Type B 2P 34.5 kv 400 single pole switches with Lapp 35 kv station post insulators. Clay-Union Electric Corp., Vermillion, S. Dak.

TRANSFORMERS

16—100 kva Transformers, G.E., serial numbers range from 5661818 to 6161569, 1-phase, 33-7.2/12.4Y kv, Type H, 5.2% imped., Taps 33000, 32175, 31350, 30525, 29700, weight 3,800 lb. each.

6—100 kva Transformers, Wagner, serial numbers 275098, -99, -100, -101, -102, -103, 1-phase, 33-7.2/12.4Y kv, 6% Imped., Taps 33000, 32175, 31350, 30525, 29700.

Make us an offer on any one or all of the above transformers.

3—150 kva Transformers, Moloney, serial number 577230, 1-phase, 13.2/-22.8Y to 2.3/4.1Y kv, 5% Imped., weight, 4,200 lb. each, $800 each, F.O.B. cars storage area Wisconsin.

2—3000 kva Transformers, Standard, serial number 52476, 3-phase, 19/33-4.1 kv, 7.3% Imped., weight 32,950 lb. each, $7,200 each, F.O.B. cars storage area Wisconsin.

1—3000 kva Transformer, G.E., serial number 6407842, 3-phase, 34.5-4.16 kv, 5.89% Imped., weight 25,300 lb., $8,200, F.O.B. cars storage area Wisconsin.

3—150 kva Transformers, West., serial number 4655138, 1-phase, 7.2-.240 kv, 3.9% Imped., weight 2,400 lb., $850 each, F.O.B. cars storage area Wisconsin. Dairyland Power Cooperative, LaCrosse, Wis.

FOR SALE (Continued)

TRANSFORMERS — 3—Westinghouse 50 kva Type C.S.P. Voltage 2400 -4160Y -120-240. Slightly used. Price $315, F.O.B. Tangier, Va. Chesapeake Islands Electric Cooperative, Tangier, Va.

TRANSFORMERS: Approximately 250 transformers, 4800 volts to 120/240 volts, 1½ kva to 15 kva. Electrically O. K. when removed from line in 1955. For further information, contact Tri-County Electric Cooperative, St. Matthews, S. C.

TRANSFORMERS — 3—150 kva General Electric
44,000—7,200/12,470 with 4—2½% taps below 44 kv
Serial # 7532429, 7532430, 7532431
Sub. Polarity, Type HS, Form W4B
Impedance 5.95%
W. S. Comings, Jr., Mgr., McLean Electric Cooperative, Garrison, N. Dak.

TRANSFORMERS — Three General Electric transformers. Voltage rating 2400/4160 240-480 single-phase type HS 60 Cycle—250 kva 4.7% impedance. Address inquiries to Sky Valley Farms Assn., P. O. Box 187, Alamosa, Colo.

60 Cy. TRANSFORMERS 1 Ph.

3—200 kva West.	44000—480
4—150 kva Mol.	44000—2400/7200
3— 75 kva West.	44000—7200/12470 Y
4—333 kva G.E.	34500—13800/23900
3—200 kva A.C.	34500—2400/7200
3—150 kva Wag.	33000—7200/12470 Y
3— 75 kva Kuhl.	33000—7200/12470 Y
3— 75 kva Wag.	33000—240/480
3—100 kva G.E.	22000—7200/12470 Y
3—150 kva Mol.	13200/22800—2300
3—100 kva Wag.	7620/13200—2400
3—100 kva A.C.	6900/11950 Y—2300

Many other transformers available.

OUTDOOR CIRCUIT BREAKERS

2—600 A 15 KV G.E. Type FLO 15-50 frame mounted solenoid operated with auto-reclosers. New 1947 bargain.

BREW, WOLTMAN & CO., INC.
48 Church St., New York 7, N. Y.

USED SUBSTATION TRANSFORMER—1 150 kva GE, Type H, 33000 primary, 7200/12470Y secondary, 60 cycle, subtractive polarity. Imp. 4.92%. Price $500, FOB Maryville, Mo. Write: Nodaway Worth Elec. Co-op, Maryville, Mo.

VOLTAGE REGULATOR—1-Step Voltage Regulator, G.E., Type MLT-32, 3-phase, 60-cycle, 390 kva, 4160 volts, serial number 6407853, weight 17,000 lb., $5,600. F.O.B. LaCrosse, Wis. Dairyland Power Cooperative, LaCrosse, Wis.

SPECIAL SERVICES

CARTOONS—Web Allison REA cartoons for your newsletter. Send for booklet and prices. Please request on organizational letterhead. Web Allison, Monte Vista, Colo.

MANUFACTURERS' NEWS & NEW PRODUCTS

New Products

Moisture - proof low voltage **"branch" or "tap" splices** that can be insulated in less than ten minutes and used under water have been made possible by a new splicing kit, according to the manufacturer. Called the "Scotchcast" splicing kit No. 90-B1, the new kit contains single-use branch splice mold and self-mixing package of "Scotchcast" electrical insulation resin No. 4. The kit has been introduced by **Minnesota Mining and Manufacturing Co.,** 900 Fauquier St., St. Paul, Minn., Dept. D6-2, makers of "Scotch" brand in-line splice kits and other electrical products.

Removable and interchangeable typewriter type, a new development permitting the typist herself to change one or all of the characters on her machine in a matter of minutes, is featured on the new Standard Typewriter just announced by **Remington Rand,** a division of Sperry Rand Corporation. Among the other features of the new 1956 Remington Standard is an expanded 44-character keyboard which enables the user to take maximum advantage of the new interchangeable type, and provides four extra characters in its standard arrangement: section and paragraph marks, a plus and an equal sign.

A simplified **coupling for cable trough** speeds installations and reduces installation costs, according to the manufacturer, **T. J. Cope, Inc.,** 711 South 50th St., Philadelphia 43, Pa. The new connector secures the two coupler blanks with a simple pin that drops in place. Assembly is much quicker than with conventional nuts and bolts. The pin can readily be removed should future changes or expansions be needed. The Pin-Type Coupling reduces the number of pieces required for one connection from 13 to 3. Nuts, bolts, and washers are replaced by only two pins. The joint is completed with a plate that fits both over and under the bottom of the trough to protect the cable. Cable Trough is widely accepted for use in supporting power cables. It is inexpensive, simple to install, flexible in awkward areas, and provides direct access to cable for inspection. New lines can often be run simply by laying a new line in existing trough.

Precision Equipment Co. announces production of a new **stair-climbing truck** which has been designed to fill the needs of firms which have found it necessary to drag loads over curbs and up and down stairways. The manufacturer says the "E-Z Climber" is strongly built with a heavy 1" O. D. tubular steel frame —electrically welded—with curved cross members. The 9" x 14" W noseplate is of heavy 3/16" steel. The unit has a reinforced base plate beam. Semi-pneumatic, 10" x 2.75", steel disc wheels are ideal even on rough surfaces. Load capacity is 600-lbs. Overall size 46" H x 18¾" W. Shipping weight is 39-lbs. Ask for literature from Precision Equipment Co., 3716 N. Milwaukee Ave., Chicago 41, Ill.

Motorola has announced the **"COMPA-STATION" transmitter-receiver** as a new addition to its standard line of fixed FM 2-way radio equipment operating in the 25-54 or 144-174 megacycle band. This low-cost, compact unit includes a 60-watt transmitter and the Motorola SENSICON "G" receiver. It features a removable control panel with built-in speaker which can be placed in any one of three positions on the cabinet for versatility in installation.

Company News

Abilities, Inc., a North Hempstead, N. Y., company, run by and for the disabled, is becoming an increasingly important General Electric subcontractor making component parts and doing product service work of a special and precision nature, according to G. E. Abilities, Inc., is only three years old and was formed originally with a personnel of four men, who altogether were able to muster one leg and five arms. Today, it boasts over 170 crippled employees, more than 90% of whom have not previously worked following their disability. About one-fourth of them are veterans.

Personnel Changes

Richard F. Gibbons has been appointed general manager of the Gardner Transformer Division of Federal Pacific Electric Company, according to an announcement by A. A. Browne, vice president of Federal Pacific Electric.

Appointment of **John L. Bricker** to the new position of director of marketing for Whirlpool-Seeger Corp., effective last month, was announced by John A. Hurley, vice president of the company.

Aluminum Company of America has named **R. T. Whitzel** as general production manager of the company.

The election of **Frederic A. Celler** as vice president in charge of sales has been announced by James H. Greene, president of The Brewer-Titchener Corp., Cortland, N. Y.

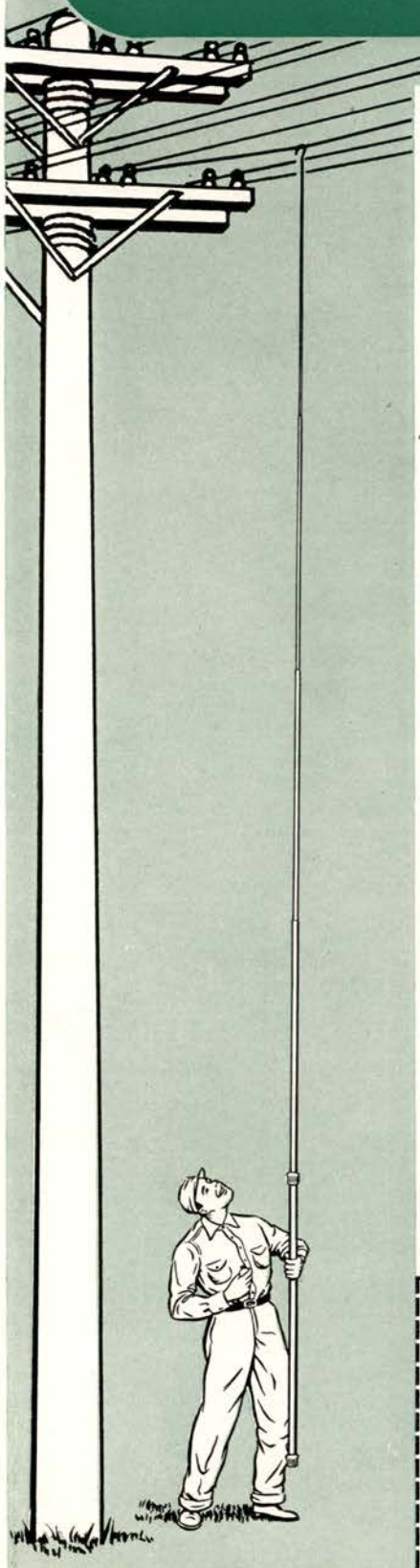
Appointment of **Nathan M. Levinson** as manager, Industrial Capacitor Division, of the Sprague Electric Company, North Adams, Mass., has been announced by Neal W. Welch, vice president in charge of sales.

John Benson has been named sales promotion manager of the range division of Whirlpool-Seeger Corp., it was announced by Austin R. Rising, range division general manager.

ADVERTISING INDEX

NEW! BY THE MAKERS OF **Actionrod** FISHING TACKLE—

EXTENDO *Fiberglass* POLES

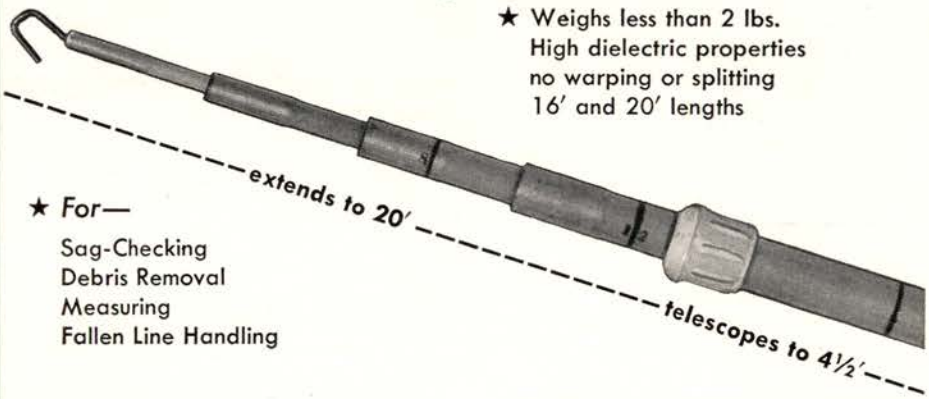


LIGHT . . . SAFE . . . CONVENIENT . . . DURABLE

Called by many the biggest improvement in line-handling tools in years, the EXTENDO fiberglass utility pole is an adaptation of the famous Extendo fishing rod. Light weight, compact, easy to carry and store, the Extendo is saving time and money for maintenance men throughout the country.

EXTENDO *Sag-Tester*

★ Weighs less than 2 lbs.
High dielectric properties
no warping or splitting
16′ and 20′ lengths

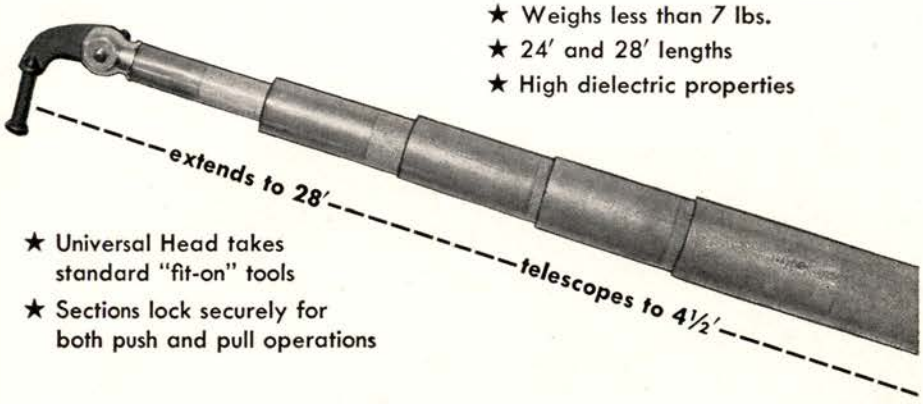


★ *For—*

Sag-Checking
Debris Removal
Measuring
Fallen Line Handling

EXTENDO *"Hot Stick"*

★ Weighs less than 7 lbs.
★ 24′ and 28′ lengths
★ High dielectric properties



★ Universal Head takes standard "fit-on" tools

★ Sections lock securely for both push and pull operations

Order* EXTENDO *Samples Today!

To: Orchard Industries, Inc., Hastings, Mich.

Gentlemen:

Please rush full information about your EXTENDO Fiberglass Poles.
Enclosed is our purchase order for samples.

( ) 16′ Extendo Sag Tester @ $17.50
( ) 20′ Extendo Sag Tester @ $25.00
( ) 24′ Extendo Hot Stick @ $64.50
( ) 28′ Extendo Hot Stick @ $78.50

*Co. Name*_____

*City*_____ *State*_____

*By*_____ *Pos.*_____


LIVE BETTER
ELECTRICALLY