

REPORT OF RURAL ELECTRIC DEVELOPMENT

AS OF

JANUARY 1, 1931

State - Virginia

Company - Appalachian Electric Power Company, Roanoke-Lynchburg Division.

1. Total square miles of territory served	<u>1,040 sq. mi.</u>
2. Number of rural communities and towns, with population of 1,000 or less, that are served	<u>44</u>
3. Total miles of distribution lines outside of towns of 1,000 population or over	<u>290</u>
4. Approximate number of customers served outside of towns of 1,000 population or over	<u>4,172</u>
5. Approximate number of farms served (as of January 1, 1931)	<u>543</u>

Using Bureau of Census definition of a "Farm":

"A Farm for census purposes is all the land which is directly farmed by one person, either by his own labor or with the assistance of members of his household or hired employees. The land operated by a partnership is also a farm. A 'farm' may consist of a single tract of land or a number of separate tracts, and these several tracts may be held under different tenures, as where one tract is owned by the farmer and another tract is rented by him. When a landowner has one or more tenants, renters, croppers, or managers the land operated by each is a 'farm'.

"In applying the foregoing definition of a 'farm' for census purposes, enumerators were instructed to report as a farm any tract 3 or more acres used for agricultural purposes, and also any tract containing less than 3 acres which produced at least \$250.00 worth of farm products in the preceeding year."

6. Total approximate annual rate of energy consumption by farm customers as of January 1, 1931	<u>655,510 K.W.H.</u>
7. Average annual rate of energy consumption per farm customer as of January 1, 1931	<u>1,207 K.W.H.</u>

8. Uses of electric service by farm customers in order of importance:

In the Farm Home

Lighting
 Water systems
 Washing machine
 Refrigerators
 Range
 Table appliances
 Vacuum cleaner
 Iron
 Radio
 Water heaters
 Lamps, floor and table
 Fans
 portable heaters
 Floor polishers

For Farming Operations

Lighting
 Water systems
 Portable motors
 Milking machines
 Refrigeration
 Brooders
 Incubators
 Feed grinders
 Dairy water heaters
 Grading machines
 Stationary spray plants
 Cream separators
 Churns
 Irrigation systems
 Drills
 Saws
 Tool grinders, clippers
 and groomers

9. Report on twenty largest farm users of electricity, including type of farm, list of equipment used, and the annual KWH used. (This list should not be all of one type of farm, but divided - as dairy farms, cotton farms, general farms, poultry farms, etc.)

<u>Name and Address</u>	<u>Type of Farm</u>	<u>Total KWH used per year</u>	<u>Equipment Used</u>
J. B. Andrews, R.F.D. #2, Roanoke, Va.	Dairy	12,560	portable motor Feed grinding Milking machine Water pump Hay hoist Lights Refrigerator Corn husker Ranges Radio
J. J. Bower, R.F.D. #3, Roanoke, Va.	Poultry and Game	3,388	Lights Radio Water system Refrigerator Range Washing machine percolator Iron
W. W. Boxley, R.F.D. #2, Roanoke, Va.	General and Dairy	9,020	Range Refrigerator Lighting

			Water system Small household appliances
G. J. Hopkins, R.F.D. #2, Troutville, Va.	General and Dairy	16,794	Radio Water system Iron Washing machine (40 H.P. pump for (orchard irrigation Kitchen aid Water heater Flood lighting Milking machine Portable motor Milk cooler Utility motor Feed grinding mill
Densmore Poultry Farm R.F.D. #3, Roanoke, Va.	Poultry	12,164	Radio Feed grinder Water system Brooders Incubators Range Refrigerator Table appliances
Frank Fallon, Roanoke, Va.	Florist	20,472	Motors for irrigation pumps Lighting
P. C. Huff, R.F.D. #2, Roanoke, Va.	Dairy and General	12,720	Water system Portable motors for feed grinding Hay hoist Sewing machine Iron Washing machine Vacuum cleaner Refrigerator Lights
A. C. Hopwood, R. F. D., Salem, Va.	Dairy	4,491	Water system Lights Iron Range Refrigerator Radio Vacuum cleaner Percolator Waffle iron

Dr. G. M. Maxwell, R.F.D. #4, Roanoke, Va.	General	4,630	Radio Water system Lights Range Refrigerator Dish washer Sewing machine Vacuum cleaner Percolator Heater and iron Waffle iron portable motors
Mrs. Geo. W. Payne, R.F.D. #1, Salem, Va.	General	8,568	Radio Water system Refrigerator Lights Range Churn
J. H. Parrot, P.O. Box #673, Roanoke, Va.	General	6,660	Radio Range Water system Churn Frigidaire Iron Heater Lights
F. D. Bolton, Fincastle, Va.	General and Dairy	2,855	Radio portable motor Milking machine Iron Range Lights Feed grinding
Harvey T. Hall, R.F.D. #2, Roanoke, Va.	General	3,815	Lights Range Refrigerator Household appliances
D. P. Sites, Masons Creek, N.W., Roanoke, Va.	General and Gardening	7,464	Lights Water systems Radio Refrigerator Range Household appliances
Dr. H. H. Trout, Roanoke, Va.	Dairy	7,760	Lights Water system Milking machine Churn Separator Iron

Troutville Poultry Farm, Troutville, Va.	Poultry	5,850	Lighting Incubators Brooders Ventilation Fans Water system
W. H. Vinyard, Vinton, Va.	General and Dairy	6,662	Radio Lights Refrigerator Range Washing machine Vacuum cleaner Heating unit
William Watts, R.F.D. #2, Roanoke, Va.	Dairy	7,023	Radio Lights Range Refrigerator Iron Vacuum cleaner Milking machine Kitchen Aid
Roy C. Kinsey, R.F.D. #3, Roanoke, Va.	General and Dairy	9,617	Radio Lights Water system Range Refrigerator Iron Vacuum cleaner Table appliances Portable motor Clipping machine Bottle washer Circulation brine pump Milk cooler
J. W. Whorton, R.F.D. #2, Roanoke, Va.	Nursery	7,815	Range Refrigerator Lights Water pump Vacuum cleaner Iron Household appliances Overhead irrigation

10. Names and addresses of rural electric service men.

L. K. McGhee - Appalachian Electric Power Co., Lynchburg, Va.
R. B. Choate - Appalachian Electric Power Co., Roanoke, Va.
L. L. Koontz - Appalachian Electric Power Co., Bluefield, W. Va.

11. Is there a State Committee on the Relation of Electricity to Agriculture in your state? Yes

(If so, give brief summary of the work of this committee)

The Virginia State Committee on the Relation of Electricity to Agriculture was formed about 1924. This committee consisted of representatives of the farm organizations, the State Agricultural College, the State Department of Agriculture, and the leading utilities. The committee fostered and supervised a two-year program of research in rural electrification which laid the ground work for rural electrification progress in the state. In 1929 the governor appointed a special joint committee on Rural Electrification to work out a state plan for making rural line extensions which has been adopted throughout the state.

12. Is there being conducted in the State any research work by the State Agricultural Experiment Station, manufacturers, your company or any other institutions? Yes

(If so, give the purpose of the projects and the institutions conducting the work)

The Agricultural Engineering Department of Virginia Polytechnic Institute has sponsored educational programs, several experimental lines, and studies of electricity applicable to farming operations.

Various manufacturing companies have placed equipment on farms for experimental purposes or as a guarantee of satisfactory service.

Rural Service Departments of the Power Companies are working with all agencies in the development of electric service on the farm.

13. Give some of the high points of rural electric developments in your company.

In 1924 the Roanoke District of the Appalachian Electric Power Company began an extensive program of rural line construction. Today its rural lines, with the City of Roanoke as the center, extend in all directions within a radius of 25 miles into the six adjoining counties.

In 1928 a Rural Service Department with an Agricultural Engineer in charge was established to assist rural customers in their agricultural and electrical problems.

In 1929 the Company filed its Rural Extension Tariff in accordance with the State wide Rural Electrification Plan affording the rural customer electric service upon most liberal terms.

14. Photographs showing outstanding applications and the various uses of the service, including the unusual. Also photographs of the development of equipment to use electricity in agricultural operations.

Information furnished by

(Signed) R. R. Choate
Rural Service Engineer

NUMBER OF RURAL CUSTOMERS

ROANOKE-LYNCHBURG DIVISION

APPALACHIAN ELECTRIC POWER COMPANY

	December 31, 1929		December 31, 1930		Gain over 1929
	Roanoke	Lynchburg	Total	Roanoke Lynchburg Total	
1. Total number farm customers	297	119	416	577 166	543 127
2. Total number rural residential customers	2026	529	2555	2356 574	2910 355
3. Total number rural commercial customers	313	187	500	375 200	575 75
4. Total number rural power customers	74	53	127	84	60 17
Total number rural customers	2710	888	3598	3172 1000	4172 574

DATA ON MILES OF RURAL LINE
ROANOKE-LYNCHBURG DIVISION
APPALACHIAN ELECTRIC POWER COMPANY

	Roanoke	Lynchburg	Total
Miles rural line built - 1930	20	11	31
Total miles rural line December 31, 1930	210	80	290
Estimated miles rural line to be built in 1931	20	20	40
Estimated gain in rural customers in 1931	400	200	600

COMPARISON OF K.W.H. CONSUMPTION
AND
REVENUE OF FARM CUSTOMERS
APPALACHIAN ELECTRIC POWER COMPANY
ROANOKE DISTRICT

	1928		1929		1930	
	K.W.H.	Amount	K.W.H.	Amount	K.W.H.	Amount
Lighting	67,317	\$6,103.59	113,740	\$8,898.66	136,274	\$10,840.40
Power (R.D.U.R.)	127,535	4,272.15	208,867	6,995.11	318,674	10,659.60
Total	194,850	\$10,375.74	322,607	\$15,893.77	455,148	\$21,500.00
Number Farm Customers December 31	194		237		377	
K.W.H. Used per Customer	1003		1086		1207	
Revenue per Customer	\$53.48		\$53.52		\$57.03	
Average Rate per K.W.H. Lighting	\$ 0.09		\$0.078		\$0.079	
Average Rate per K.W.H. R.D.U.R.	\$0.033		\$0.033		\$0.033	
Average Rate per K.W.H. All Service	\$0.053		\$0.049		\$0.047	

