

BROKEN WIRES AND POLES.

During the year there were reported 699 cases of broken wires and sixty-five broken poles.

From incomplete returns the approximate number of miles of each size of conductor is scheduled below, together with a summary of the number of breaks reported in the respective sizes of wires in use. From this it will be seen that the proportion of breaks per mile of conductor erected is very small, and it is significant that 24.4 per cent. of same were directly attributable to the proximity of trees.

As regards broken poles, it has been assumed that, taking an average of twenty-five poles or supports per route mile, there are approximately 426,000 in service, and the proportion of broken poles reported is thus also very small.

Actual Mileages and Sizes of Overhead Conductors in Use at 31st March, 1928.

Size of Conductors (S.W.G.).	Copper.	Failures.	Aluminium.	Failures.	Galvan- ized Steel.	Failures.	Galvan- ized Iron.	Failures.	Copper- weld.	Failures.	Steel-cored Alumi- nium.	Failures.	Bronze.	Failures.
	Miles.		Miles.		Miles.		Miles.		Miles.		Miles.			
7/20 ..	4,447	218	..	..	..	..	..	..	..	..	..	..	..	..
7/18 ..	7,194	226	..	..	..	..	..	..	..	..	..	..	..	..
7/17 ..	1,278	4	..	..	..	..	..	..	..	..	..	..	..	..
7/16 ..	9,635	79	46	..	..	..	..	..	..	..	..	..	..	..
7/15 ..	207	..	2	..	..	..	..	..	..	..	..	..	..	..
7/14 ..	7,458	28	71	..	221	..	..	..	..	..	..	..	..	..
7/13 ..	1,052	..	..	..	..	..	27	..	..	..	..	..	..	..
7/12 ..	345	4	162	3	..	..	..	..	..	..	..	1	..	..
19/12 ..	139	1	..	..	2	..	..	..	..	..	2	..	..	..
19/13 ..	1,187	..	..	..	..	..	..	..	..	..	..	..	..	..
19/14 ..	491	2	..	..	..	..	..	..	..	..	..	..	..	..
19/15 ..	419	4	..	..	..	..	..	..	..	..	..	..	..	..
19/16 ..	722	4	..	..	..	..	..	..	..	..	..	..	..	..
19/18 ..	177	4	..	..	..	..	..	..	..	..	..	..	..	..
12 ..	2,083	102	..	..	..	..	96	..	..	..	..	..	30	..
10 ..	8,797	151	..	..	222	..	251	..	353	4	..	..	..	..
8 ..	9,480	105	..	..	1,715	7	5,248	7	622	..	..	..	..	..
7 ..	..	5	..	..	..	..	..	..	89	..	..	..	..	..
6 ..	45	..	..	..	..	..	15	..	22	..	..	..	..	..

Miscellaneous Sizes.

7/10 ..	14	..	8	..	..	..	..	..	..	..	..	..	..	..
7/062 ..	..	..	..	..	..	..	..	..	..	..	107	..	..	..
7/1227 ..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
7/135 ..	..	..	83	..	..	..	..	..	..	..	..	..	..	..
6/186 ..	..	..	42	..	..	..	..	..	..	..	..	..	..	..
6/144 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9/16 ..	13	..	..	..	..	..	..	..	..	..	..	..	..	..
1/16 ..	22	..	..	..	..	..	..	..	..	..	..	..	..	..
3/123 ..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
3/12 ..	..	..	10	..	..	..	..	..	..	..	..	..	..	..
3/10 ..	..	..	44	1	..	..	..	..	..	..	..	..	..	..
37/12 ..	34	..	..	..	..	..	..	..	..	..	..	..	..	..
37/10 ..	10	..	..	..	..	..	..	..	..	..	19	..	..	..
3/0 ..	..	..	..	..	..	..	..	..	..	..	1,140	2	..	..
2/0 ..	..	..	..	..	..	..	..	..	..	..	59	..	..	..
Totals ..	55,249	..	470	..	2,160	..	5,637	..	1,086	..	1,329	..	30	..

Total miles, 65,961.

NOTE.—Return incomplete.

GROWTH OF LOAD.

In the early days of electric supply electricity was used almost exclusively for lighting purposes. With the advent of electric motors and the application of electricity for heating purposes the power and heating load increased, until at the present time the energy used for lighting is small compared with that used for other purposes. The benefits of electric drive in factories and workshops have to a large extent been taken advantage of, and the use of electricity for commercial heating and domestic heating and cooking is rapidly increasing. The use of electric ranges and water-heaters during the past few years tends to confirm the opinion that the use of electricity for domestic purposes will soon exceed the demand for industrial and commercial uses.

Returns have again been obtained of electric ranges and water-heaters in use throughout the Dominion, and the figures obtained continue to show satisfactory increases over those of the previous twelve months, and the statistics obtained for the year ending 31st March, 1928, have been scheduled in Table Y. Of the ninety-nine electric-supply authorities engaged in retail distribution of electric energy, eighty-three of them have an aggregate total of 15,766 electric ranges connected to their systems, and the number now installed represents an increase of 66 per cent. for the year. The return shows the percentage of consumers using electric cooking to the total number of consumers being supplied in each area respectively, and an examination of this column shows where the field for electric cooking still remains to be developed.

The number of consumers using electric water-heaters has increased from 14,160 to 21,513 during the year, an increase of 51.5 per cent.