

Clearing Up Interference

Legislation Urged by Special Committee

AN interesting discussion took place at the annual conference of the Electric Supply Authority Engineers' Association on Monday last, September 25, on the subject of radio interference and means which may be taken to reduce such trouble from many and varied sources. The engineers are fully in accord that everything possible should be done to remedy causes of interference, and gave hearty support to the report of a special committee set up at the last conference (states the "Evening Post"). The committee recommended that legislation should be sought for the drawing up and enforcing of suitable regulations.

After referring to the resolution passed at the last conference, the committee stated that during the past year the Government had set up a committee to report on radio interference. The executive requested that the power board and supply engineers should be given representation on that committee; this was willingly acceded to, and the following committee was set up:—Messrs. Plank, Gibbs, Millar, and Lauchlan.

Several meetings were held, at which the causes of radio interference, method of remedy, and liability for the same were discussed. One of the most interesting reports submitted was that of the joint co-ordination committee on radio reception of the National Electric Light Association, National Electric Manufacturers' Association, and the Radio Manufacturers' Association, as follows:—

1. The increased use of higher power broadcasting stations will ensure a better coverage of the country and higher field strength for most communities, and will in general improve reception.

2. Designs of radio sets to have minimum susceptibility to external disturbing fields will materially aid in solving the interference problems.

3. Proper installation of radio sets to ensure minimum coupling between the antenna and house circuits apt to set up disturbing fields will help.

4. Installation of radio frequency filters on devices found to be sources of serious interference will aid in some cases.

5. Ordinances relating to radio interference as well as to other technical matters are generally ineffective and frequently set up standards which are in a few years a serious hindrance to the proper solution of the problem.

Suggestions to Minister.

Mr. Geo. Lauchlan, president of the association and chairman of the radio interference committee, said that after considerable discussion the committee had decided to make certain recommendations to the Postmaster-General whereby the position would be cleared and effective steps might be taken. It was suggested that the Post and Telegraph Department should act as a clearing house for complaints of interference and should investigate complaints and allocate the responsibility for remedying or improving the position, co-operating as far as practicable with electric supply and tramway au-

thorities and users of electrical equipment in an endeavour to remove causes of complaint.

It was suggested to the Minister that regulations should be made under the Post and Telegraph Act to require anyone using apparatus causing interference with radio reception either to remove such apparatus or take such remedial action as was considered reasonable, and also to prohibit the installation of appliances inherently capable of causing interference unless such appliances were supplied with devices for preventing their radiating high-frequency oscillations and so causing interference.

Further, said Mr. Lauchlan, it was proposed that provision should be made for the reference of cases of sufficient importance and of cases in respect of which an appeal had been made to an advisory committee, which would investigate the cases and recommend a course of action considered fair and reasonable in view of all the factors involved. It was suggested that such an advisory committee should consist of qualified electrical engineers and should be representative of the Post and Telegraph Department, the Public Works Department, the Broadcasting Board, and the electric power, lighting, and tramway undertakings.

Causes of Interference.

Mr. C. S. Plank, chief engineer, Post and Telegraph Department, gave some interesting points as to the work of the department. There was at present no power, he said, for the making of regulations, and it was therefore proposed that during the Parliamentary session an alteration to the Act should be made so that regulations could be promulgated and enforced. The Post and Telegraph Department would investigate complaints of radio interference as it had done in the past.

Mr. Plank gave particulars of complaints investigated by the department during the past six months "in order that some people can see for themselves where the blame should be placed." Summarised, his figures were as follows:—Power lines and fittings (under many sub-headings), 214; trams, 54; motors, 59; street lighting systems, 67; medical apparatus, 33; battery chargers and rotary converters, 17; domestic appliances, 6; trees touching power lines, 22; morse signals, 42; telephone dialing and ringing, 11; amateur radio transmitters, 35; howling valves, 90; unclassified complaints (cause disappeared, etc.), 110; complaints considered not justified, 54. A variety of other causes giving rise to lesser numbers of complaints brought the total to 1249 for the six months.

Referring to tramcars and trolleys, Mr. Plank said that the department had received fewer complaints than it should, because the general public had been given to understand and to accept as a matter of course that interference troubles were inherent in tramway systems and that nothing could be done to remedy them, but the experience

was that in many cases the trouble could be removed at little expense. The interference from amateur transmitters and howling valves was more prevalent than the figures given indicated, for they were in respect of ascertained cases, and that type of interference was often intermittent, whereas other causes persisted until discovered.

Those Who Will Not Help.

Mr. Plank said that in most cases every assistance was given by the owners of plant causing or suspected to be causing interference, and most power boards and engineers fully realised that it would pay them in the long run to assist in removing faults that would be likely to make radio less popular. There were, however, some faults which were in a different class. In one case not only did the owner of a sawmilling plant fail to do anything to rectify a sparking commutator or to be guided by advice, but he refused to allow the listeners of his district, who were willing to go to some expense in the matter, to do anything to remove the nuisance. It was to meet such cases that it was proposed that regulations should be drawn up and enforced.

In the Hutt Valley was another case, said Mr. Plank. Here an oil-burning heating plant had been installed, and though the machine was manufactured in America with a radio protective device, that device was removed when the plant was erected here on the ground of economy. It was obviously recognised in America that such a device was necessary, and as a consequence of its removal in New Zealand radio reception within half a mile of the installation was impossible when the plant was in operation, as it was practically all the winter months.

In the great majority of cases, said Mr. Plank, only slight expense would be entailed in remedying the trouble, but to meet possible cases of hardship it was advisable that there should be such a board as was suggested to ascertain what should be required of the owner. It was hoped that during the present session of Parliament legislation would be passed to enable the committee to function.

Mr. W. A. Waters said that he considered the committee should wait till it ascertained what the Broadcasting Board was doing in the matter.

Mr. H. F. Toogood remarked that stations themselves were a cause of unsatisfactory reception. In Wellington there were two stations, and when both were on the air they caused, in some receivers, poor reception through overlapping. A higher power would lift signals above the noise level, and so improve reception. If the Broadcasting Board would take into account that its stations should be located some distance from Wellington, and should be of higher power, a great deal of the interference trouble would disappear.

After some further discussion the report of the committee was adopted.