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No.

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TECHNICAL NOTE

PREPARED BY R. F. Legget

CHECKED BY HBD

APPROVED BY RFL

DATE 31 May 1967

PREPARED FOR Standing Committee on Residential Standards and
The Associate Committee on the National Building Code.

SUBJECT Developments in Electrical Heating and Wiring

On Thursday 18 May 1967 a meeting was held in the Ontario Hydro Board Room at 123 Edward Street, Toronto, to discuss the Residential Electric Heating Standards of the Ontario Electrical League in relation to the National Building Code of Canada. The writer of this note was present with his colleague Mr. H. B. Dickens and two representatives from the Toronto Regional Office of Central Mortgage and Housing Corporation. The meeting was held so that the writer might meet with Mr. R. G. Ellerker, the Chairman of the Electric Heating Standards Committee of the League and some of his associates. A list of those present at the meeting is given at the end of this note.

A full, frank, and cordial discussion was held against a background presented by the writer of the development of the National Building Code, the original CMHC Housing Standards, the incorporation of these and the Apartment Standards into the National Building Code as Supplement No. 5, and the wide adoption of the Code itself throughout Canada and Supplement No. 5 as the regulations used by CMHC under the terms of the National Housing Act.

Mr. Ellerker and his colleagues explained how the Ontario Electrical Service League and the Electric Heating Association of Ontario had recently been amalgamated into the Ontario Electrical League. This is the body which has taken over responsibility for the

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development of the desirable standards required in residential construction when electric heating is to be used. The Ontario Electrical League has set up the Electric Heating Standards Committee of approximately 18 members headed by Mr. Ellerker, and including Mr. A. T. Hansen of DBR/NRC and Mr. W. McCance of the National House Builders Association. The purpose of this committee is to provide continuous surveillance and revision of the standards in question.

The rapid development in the use of electricity for heating throughout Ontario which now exceeds 30,000 houses, was described. The same development is taking place in other provinces in consequence of which the Ontario Electrical League is in touch with similar leagues in at least four other provinces with the idea of sharing the standards that have been developed for electric heating requirements. This development has taken place without the benefit of a special rate for electric heating upon which the use of heat storage units with electricity can economically be based. Naturally Mr. Ellerker and his associates look forward to a further and steady increase in the use of electric heating.

The character of the meeting was such that it was possible to discuss quite frankly the impression that is current in some quarters (including some CMHC field inspectors) that the OEL electric heating standards must be used for residences that are to be equipped with electric heating if the Ontario Hydro is to connect up electrical service to the house in question. This caused much amusement and the pleasant comment that the publicity of the Ontario Hydro and the OEL must really be good if such an impression has been created.

Mr. Ellerker and several of his colleagues assured all present that in no way whatever was any such mandatory use of the electric heating standards intended. It is only if the owner or builder wishes to be awarded the OEL triple seal of approval for Electric Heating or one of the Electric Medallion Certifications that the requirements must be met in Ontario. They are recommended only and league representatives thought that this was made clear in the introduction to the Standards. When this clarity was questioned, the suggestion was made that a revised wording to make this position quite clear would be welcomed by Mr. Ellerker's Committee, for use in the next edition.

It is the hope that, as a recognized set of desirable standards for electrically heated residential construction, the document prepared by the OEL might usefully be used by other provinces and so come into national use. Such a possibility makes it all the more

essential that the recommended character of the document be crystal clear from its own wording and that its relation to the minimum standards set out in Supplement No. 5 to the National Building Code be equally clear. The meeting was assured that this will be done with the next edition of the document in question.

The discussion developed from these considerations into a more general review of the increasing demand for more electrical services in modern homes which it was claimed necessitated an improvement in standards of electrical wiring, even on a minimum basis. The views of the National House Builders Association on this matter were placed before the meeting but several of those present stated that, in Ontario at least, the day when a 60-amp service was sufficient for even minimum household electrical equipment had gone and that even 100-amp service was little enough to require as a minimum. The writer mentioned some of the experiences of the Fire Section of DBR/NRC which, in its investigation of serious fires in residences, found all too often that fuse boxes had been tampered with because of limitations of electrical circuits.

After further discussion it was agreed that this matter is so important that it warrants the holding of one of the NBC special closed meetings. The writer promised to put this suggestion before the Associate Committee on the National Building Code and its Standing Committee on Residential Standards with the proposal that a meeting of representatives from these Committees, from the National House Builders Association, from the OEL, and possibly from one or two other provincial electrical organizations, might be convened in the early fall, in time to suggest any desirable changes in the electrical sections of Supplement No. 5 well before 1968.

This led finally to a discussion of the best way in which the Associate Committee on the National Building Code could maintain liaison with the electrical industry in general and not only the electrical utilities. It is hopefully expected that the close and happy links which now exist between CMHC, DBR/NRC, and OEL may continue and develop. On a more formal basis, however, it was agreed that the Associate Committee should look to the Canadian Electrical Association only as representative of all interests concerned with the electrical industry of Canada.

Summarizing the results from this most useful discussion (which closed at about noon) the following conclusions may be recorded.

1. The Residential Electric Heating Standards are recommended only and are meant to be supplementary to such documents as Supplement No. 5 of the National Building Code of Canada. Since this is not clearly stated in the introductory statement to the March 1967 edition, a revised statement will be suggested by the writer to the Ontario Electrical League for consideration for the next edition.
2. There was full understanding as to the essential minimum character of the provisions in Supplement No. 5 and in the National Building Code regarding residential construction. The Ontario Electrical League will assist in keeping the references to electrical matters in the Code, and particularly in Supplement No. 5, up-to-date and correct as minimum requirements in the interests of public safety.
3. It was agreed that there is no conflict between the two documents since the standards as issued by OEL are admittedly higher than the minimum standards in the NBC in the interests of promoting customer satisfaction in the use of electric heating.
4. It was agreed that it would be desirable to have a special meeting later in the year at which the current provisions for electrical wiring in the NBC and especially in Supplement No. 5 could be critically reviewed by representatives of the appropriate Committees, by the NHBA, and by the electrical industry of Canada including the Ontario Electrical League.
5. It will be in order for the Associate Committee on the National Building Code to regard the Canadian Electrical Association as its formal channel of communication with the electrical industry of Canada to be supplemented by such contacts as those which so happily exist between ACNBC, DBR/NRC, and OEL.

List of those present at the meeting held on 18 May 1967 at Ontario Hydro Board Room, Toronto.

Mr. H. B. Dickens	- DBR/NRC
Mr. R. G. Ellerker	- Northern Electric Co. Limited
Mr. R. B. Jackson	- Ontario Hydro
Dr. R. F. Legget	- DBR/NRC
Mr. D. E. Lindsay	- CMHC Regional Office, Toronto
Mr. G. K. F. Pepper	- Ontario Hydro
Mr. H. J. Petursson	- CMHC Regional Office, Toronto
Mr. W. L. Scott	- Ontario Electrical League
Mr. G. H. West	- Ontario Hydro, Research Division