

the establishing of a standard system is certainly in order.

Mr. Street: I would have great pleasure in moving that a committee be appointed to standardize the system of accounts.

Mr. Bilger: I second that.

The President: The motion is that a committee be appointed to arrange if possible a standard system of accounting for central electric lighting stations belonging to this Association. The question is open now for discussion, and in process of the discussion of that motion you can probably further take up the points of Mr. Hart's paper. Does anyone wish to raise any objection to the appointment of such a committee?

Mr. Hart: Speaking to that motion of Mr. Street's, the wording of the motion hardly, I think, covers the idea I wish to convey in the paper, which is, to appoint a committee to standardize the system of accounting for central stations operating in Canada. That is the idea of the paper. Mr. Street's motion is as to the stations the managers of which are members of this Association. I think if the motion were put to read, "the accounting is to apply to central stations operating in Canada," it would more properly cover the point, than simply putting his motion in that form, that the standard system be applicable only to members of this Association.

Mr. Street: I am quite willing to change the motion, in fact the motion may be worded in any way that is suitable. I am quite agreeable to change it as Mr. Hart suggests.

A. A. Wright: If I remember, about four years ago the National Electric Light Association arranged for a thing of this very kind; blanks were furnished and every member of the National Association received a copy of these blanks, but nobody else. Of course, it is not necessary we should follow their rules, but they considered that subscribers or those who assisted in this way should get the full benefit, and those who remained at home in the manger should stay there.

Mr. Gossler: If I understand the paper rightly, the main object of it was to impress upon all the necessity of keeping a system of accounts whereby the cost of production would be obtained, and I really believe there are very few of us who can tell exactly what the cost of production per arc lamp hour is. While I would not for a moment discourage any movement to establish a systematic or standard method of accounting, it seems to me that the first thing to be impressed upon us is to be able to tell exactly how much it costs us. I think the object of the paper is to establish the fact that a system of accounting to obtain those ends is the first thing to be gained.

The President: As I understand the paper, it is a recommendation that some general system that can be used by stations of all sizes, and be of a uniform plan, should be recommended for adoption by the members of the Association, and that the author of the paper has undertaken to show by a system already in vogue, how the costs can be ascertained, and how they can be ascertained in the various forms—the various details of those costs. And the purpose of the motion now offered by Mr. Street, I understand, is to carry out the suggestion of the author of the paper, that a uniform plan be adopted by this committee, and report to the Association as being one that is feasible for all companies to use, and recommend that all companies do use it, so that they will have some basis upon which to compare their various costs of operation, and the various sorts of revenue. Having different methods of accounting, one man is able to say, well, the inspection of my lamps costs me so much; another man is not able to say whether it does or not, because he has it involved with something else. One man is able to say how much it costs him per hour of output for fuel; another man is not able to say that because he has incorporated with the cost of fuel wages of the men, handling, and so on, and I take it that the purpose of the author of the paper and the mover of the motion is, that this committee will take this matter in hand, and endeavor to recommend some uniform plan which will achieve the result. Am I correct?

Mr. Hart: Quite correct, as far as my paper is concerned.

Mr. Street: Yes.

The President: I would like to hear any objection that there may be to this, if any.

Mr. Noxon: I can not see how there can be any objection to it on the part of any person, excepting the committee. This is a thing that is offered to the Association, as I

understand, without money and without price. They can use it as they see fit; we don't have to do any work in connection with it outside of the committee. I don't see why we should kick if the committee will do this work; I don't see that we can raise the least objection; I think, on the other hand, that it is a thing that would be of very great benefit. There is no doubt, whatever, that every person connected with electric lighting interests knows that the matter of keeping accounts, and to tell what your light is costing, and what you are producing it at, and what you are getting for it, is one of the most important things in connection with the business, especially in this business where the margins are fine. If this committee will take upon themselves to do this work I certainly think this Association, instead of taking up the matter and debating every question, should be very glad to accept of their kind offer to do so.

The President: I take it, however, gentlemen, that the assentive action of this Association to the formation of such a committee carries with it some application by making use of the results of that committee's work.

The President put the motion, which, on a vote being taken, was declared carried.

The President: I will now appoint as that committee, the mover of the motion, Mr. Street, the author of the paper, Mr. Hart, and I think our friend Mr. A. A. Wright, of Renfrew. (Applause.) Is it desired to have any more talk on this paper? If not we will proceed with the other one. Before proceeding to the reading of the next paper, as the result of our question box up to date, we have one question, and I will call upon Mr. Leyden in the hope that he may be able to answer it. "What is the watt gain in transmission on the line of the Cataract Power Co.? How do you explain it? Could it be possible that the line is crossed with the Radial Railway?" (Laughter)

Mr. Leyden: Of course, most of you understand that there is no watt gain at all; there is a gain in the rise of electrical potential; we have a higher potential at this end than we do at the starting end; at no load it is ten per cent. and then it varies as the load comes on; the moment you equalize that by self induction due to transformers or motor load of any kind it disappears. There is no gain in watts at all, and the weight of evidence is that while you have 10 per cent. higher voltage on this end of the line, you have a current flowing into the line from the other end that may have 20,000 volts; we have about 18 amperes per phase on 2,000 volts, and it is shown that there is no load on this end at all, that the current coming in here just counterbalances the rise of potential at this end, and when we put a small load on this end the current at the other end still shows up about the same rate; that is, we can put say five amperes of current on this end and it won't increase the current at the other end at all, because there is the 18 amperes originally going in there, and that decreases as the load increases. There is still, however, with a very considerable load on, a matter of a thousand h.p., a slight rise in potential at this end over what it should be, but there is no gain in watts. There couldn't be. But it is a phenomena that is well understood and known as the Ferranti Law, and it is figured out beforehand to determine the capacity of the line, and you know exactly what the effect will be. But there is no gain in watts at all, just an apparent gain in potential.

The President: We have a few other questions which have arrived, one is "Where is the proper place to begin charging customers for wiring—at the property line or inside of the building, or any other place?"

J. J. Wright: I should charge right from where it touches the building, then if it burns the fellow down he can't saddle you with the cost of it. Charge for the wiring the moment it touches the property line, that is, the building itself, or gets on the property of the consumer; it is his wire, and he is responsible for the safe keeping in every respect.

The President: What about the meter?

J. J. Wright: The meter, of course, would be excepted, but the wiring would be the property of the consumer.

A. A. Wright: The cut-out and the switch?

J. J. Wright: Yes.