

find themselves hampered during a rush of business by having to shut down at four o'clock.

Mr. Leonard: I think I can give you an idea that will clear up what you have in mind, and relieve you as to the matter of interference of the two loads. If the contract provides that the manufacturer close down at four o'clock, I don't think there will be any difficulty in getting the load back again by 7 o'clock, and at 7 o'clock you have generally passed the peak of your load; after those hours anything you can get is very welcome.

The President: I think, perhaps, I can assist that a little further by a personal example. We have one case of about 450 h.p. where their contract provides that they shall have the privilege of using about 450 h.p. during twenty hours of the day, and during the other four hours of the day the maximum of their requirements shall be 300 h.p., thereby getting about 33 1/3 per cent. of their capacity in consideration of that reduction. By that means they get a very much lower rate for their 450 h.p. during the twenty hours and 300 h.p. during the four hours than they would otherwise be able to get, for the reason that the company would be obliged to get the full return on the 150 h.p. that was cut off as if they sold it in light, consequently the power consumer would have to pay a very high price.

Mr. Noxon: I would merely ask if this phase of the business would be advisable. The reason I ask this is, because we are proposing to go into furnishing power by making a contract. Would it be advisable in making a contract, provided they wanted to use the power continuously, which of course would be an object, to stipulate that we would make a provision that the hours from four to eight should be entirely exempt in any case; that they could use the other twenty hours in any way they wished.

Mr. Leyden: That is a form of contract we use.

Mr. Wyse: I would like to ask Mr. Gossler if his day load is equal to his peak load in winter? I understood him to say that his day load was equal to or greater than his peak load at night; does that apply to the peak load in winter.

Mr. Gossler: If I remember correctly, I think I said that our day load last winter at the time of our very heaviest load was approximately 75 per cent. of the night peak load. Next winter we expect to be in excess of the night peak load.

Mr. Reesor: Mr. Leyden said a minute ago that it would make a material reduction to a customer. I would like to ask how much reduction do you propose to make between a customer that uses it from 7 to 6 and one that uses it from 7 to 4 in the afternoon.

Mr. Leyden: I don't know that I can give you any positive figures, but I figure it would be about 25 per cent. difference. It makes a very great difference to you. You can figure about how much your full capacity is, so much horse power delivered. If you can sell it twice, if you get 75 per cent. of the value of it for each time, you are getting 50 per cent. more than you would in the rates, taking it the other way.

Mr. Reesor: If a customer says I want 50 h. p., and I will agree to take it from 7 to 4, what percentage would you say?

Mr. Leyden: 25 per cent., at least.

The President: In my address at the opening of the convention I took occasion to refer to this, for the reason that I regarded it as being probably the most important question for operating companies. In answer to the question put to Mr. Leyden just now as to the difference between the man who would use up to four o'clock in the afternoon, and another one who would require to use up to six, you can arrive at it by determining how much revenue you would get out of that amount of power during those two hours from lighting. Lighting during those two hours is a necessity, you can't get along without having the light; therefore, assuming that you can sell electric lighting, how much revenue can you get from the lighting for those two hours out of that amount of power? Having determined how much revenue you want from the power for the entire day, you will be able to know how much you can afford to get out of it during those two hours of lighting, and

the balance devoted to selling the power at a cheaper rate. In other words, you have a given plant out of which you must get a certain return; that certain return for lighting only must come out of those two hours. If you can get that return, plus 50 per cent., by selling the power during the rest of the day, outside of those two hours, evidently you can afford to sell that power for only 50 per cent. of what you get for the other two hours. I will now ask Mr. Plews to read his paper, entitled, "The Protection of Low Tension Wiring against Dangerous High Potential Currents." It is a short paper, but it is on a subject that is very likely to engage your attention very thoroughly, and it will, undoubtedly, call for a considerable amount of discussion. In order to assist Mr. Plews in the demonstration of his paper, and to enable him to answer any questions you may wish to put to him in a way that will appeal to you, Mr. Wickens has kindly loaned us a blackboard which we will have set up before you, and Mr. Plews can mark his diagram on that.

Mr. Plews then read his paper. (See page 162.)

The President: This is perhaps the most important paper that we have had for some time; it is one that interests us all very keenly, and we must very highly compliment Mr. Plews if he has accomplished successfully the device which he has set forth here. It is something that should be immediately put into service if it is one that can be relied upon to accomplish what he says, and we certainly thank him very highly for bringing it to our attention.

(Mr. Plews at this point drew a diagram on the blackboard illustrating the apparatus described in his paper, and by means of it answered many questions which the members asked as to the method of use, its reliability, etc.)

The President: I think the most cordial thanks of this convention should be extended to Mr. Plews for exploiting what he has done so far, and even if it be not complete, it certainly is a step in the right direction, and we should certainly assist him all we can to accomplish the results desired, without introducing other elements of danger. I move that the thanks of the convention be extended to Mr. Plews. (Applause.) Now, we will hear from Mr. Leonard.

Mr. Leonard read his paper, entitled "Transformer Economy." (See page 154.)

The President: Gentlemen, it is too late to undertake any remarks to-night on this paper, but I think I can say that it is one that every one of us can take home when we get the printed form, read it over carefully and attentively, study it, and bring it to the attention of our associates in our companies. It strikes the key note of one of the most important economies of central station operating. I hope that to-morrow morning, after the election of officers, upon the resumption of the papers you will be prepared to take up the discussion of this paper thoroughly.

The convention adjourned at 4:45 p.m., to re-assemble on Friday morning.

At 5 p.m. the members and friends were privileged, by courtesy of the Hamilton, Grimsby and Beamsville Electric Railway Co., to enjoy an excursion over the company's lines, 21 miles in length, traversing one of the most picturesque and beautiful districts of Canada. On returning to Hamilton a visit of inspection was made to the terminal station of the Electric Light & Power Co.

#### THE BANQUET.

Upwards of one hundred members and guests participated in the annual banquet. It was the first event of the kind held in the handsome dining hall of the New Royal hotel. The menu, as well as the service, displayed the skill of the management. The President, Mr. W. H. Browne, discharged in an acceptable manner the duties of chairman and toast master. The following gentlemen occupied places of honor: His Worship, Mayor Teetzel, Hon. J. M. Gibson, Hon. Mr. Shepherd, United States Consul, ex-President J. J. Wright, President-elect A. A. Dion, Mr. A. F. Pirie, ex-president A. B. Smith, Mr. Fred Thompson, Mr. John Moodie, Mr. John Knox, Mr. John Patterson.