

monument lot with their rays directed toward the lower portion of the monument, while projectors from the Raleigh Hotel, from the State, War and Navy Building and from the Potomac Electric Power Company's building will be directed to the north and east sides of the shaft. Flagpoles located back of the Columbus Memorial at Union Station will be brilliantly spiraled with electric lamps, and "spot" lamps will be used to bring out the beauty of the memorial. Cedar trees, effectively decorated in the manner of a Christmas tree or with festoons of lamps suspended immediately over them from poles, will be used to outline the plaza at Union Station. In all of the festoon work for the inauguration decorative twin-conductor cables will be used and the lamps employed will be mainly of 4-cp rating with clear globes.

Contract Between Great Falls Power Company and Puget Sound Railway

In connection with the plans for the electrification of the Chicago, Milwaukee & Puget Sound Railway from Harlowton, Mont., to Avery, Idaho, the details of the contract between the railway company and the Great Falls Power Company, mentioned briefly in our issue of Jan. 11, are of some interest. This contract is made part of the articles of agreement between the power company and the federal government, by which a fifty-year grant of right-of-way for transmission lines across public lands was secured.

The railway company agrees to electrify its line between Harlowton and Deer Lodge, Mont., before Jan. 1, 1918, and also agrees to buy from the power company electric energy at the rate of 10,000 kw for the full period of the ninety-nine-year agreement, but two years' notice will be given the power company that delivery must commence. The railway company has several options for more power, up to a total rate of 25,000 kw, as follows: Not less than 4000 kw, nor more than 8000 kw, if called for prior to Jan. 1, 1923; not less than 3500 kw, nor more than 7000 kw, if called for between the last date and Jan. 1, 1928; or, failing to exercise the foregoing options, the full 25,000 kw may be called for at any time between Jan. 1, 1918, and Jan. 1, 1928, if at least 6300 kw additional has been called for prior to Jan. 1, 1923. Additional energy, when once called for, as above, will be supplied for the entire remaining term of the contract. The power company is not liable for interruptions to supply, nor the railway company for interruptions to its consumption, owing to causes beyond their control, such as strikes, fires or floods. The contract will be broken automatically in the event that the federal government permanently enjoins at any time from the enjoyment of its privileges. The railway company is made a preferential customer entitled to first service.

Delivery of energy will be made to not more than five stations between Deer Lodge and Harlowton, at 50,000 volts or 100,000 volts, three-phase, 60 cycles, alternating current. The voltage shall not be changed except by mutual agreement. The railway company will receive the energy at the terminals of air-break, high-tension line switches to be provided by the power company and will transform and distribute such energy to its line of railway in such manner as it sees fit. Watt-hour meters and curve-drawing wattmeters will be employed to measure the energy delivered. The railway substations are to contain sufficient synchronous machinery to secure a power-factor, leading or lagging, of at least 80 per cent. Twelve months' notice will be given the power company of the location of the delivery points. The power company will also have the right to install Tirrill regulators in the substations for the operation of synchronous machinery in such manner as to receive any power-factor between 80 per cent leading and 80 per cent lagging.

The rate for energy will be \$0.00536 per kw-hr., subject

to a minimum bill after the first year of service equivalent to 60 per cent of all the energy contracted for. The power company is also required to pay the federal government a tax of 5 mills per 1000 kw-hr. for all energy delivered over transmission lines crossing the public domain. Other details between the power company and the government were published in our issue of Jan. 11.

The power company also has the conditional right to occupy the railroad right-of-way with its transmission lines, subject to sixty days' notice of removal, and such transmission lines shall not interfere with the operation of the railway or its telephone or telegraph lines. The railway company is forbidden to resell any of the energy purchased of the power company. Disputes of any nature between the two companies will be referred to and settled by a board of three arbitrators, chosen one by each company and the third by these two.

Conference on Meters in Ohio

At a conference of meter men from the electric lighting companies of Northwestern Ohio, held at Lima, Ohio, on Jan. 17, the following subjects were presented for consideration and general discussion: (1) Advance in metering conditions to be brought about by co-operation of the various meter departments, by Messrs. A. H. Bryant, of Cleveland, and R. S. Graves, of Cincinnati. (2) Importance of maintaining meters within commercial accuracy, by Mr. F. C. Jennot, of Marysville. (3) Essentials in meter testing, by Mr. C. B. Stelle, of Springfield. (4) The office and record side of meter testing, by Mr. John Himes, of Dayton. The meeting, one of the first of its kind ever held in Ohio, was a source of encouragement to the meter committee of the Ohio Electric Light Association, which is trying to bring about a co-operation among the electric-lighting companies of Ohio so as to obtain a more efficient metering system.

Opposition of Wood Preservers to Duty on Creosote

At the ninth annual meeting of the American Wood Preservers' Association, held in Chicago on Jan. 21, 22 and 23, there was an attendance of about 200, including many representatives of railroad and commercial wood-treating plants. In his address President E. A. Sterling, of Philadelphia, remarked that the membership of the association had increased from 104 to 157 during the last year and that it was doing a constantly increasing amount of useful work. The association aims to standardize wood-treating processes. Mr. Sterling referred to the decided advance in the price of creosote during the year and to the additional menace pending because of the proposed 10 per cent duty on imports of creosote. He recommended various subjects of investigation by committees and urged that the association give greater publicity to its work.

The secretary-treasurer's report, submitted by Mr. F. J. Angier, of Baltimore, showed the finances of the association to be in a satisfactory condition. Twenty-nine railroad companies are represented in the association and a considerably larger number of commercial wood-treating plants. The wood-preserving industry is perhaps on a better basis than ever before. The secretary also read a letter recently written by President Sterling to Mr. O. W. Underwood, chairman of the ways and means committee of the House of Representatives, in which, speaking for the American Wood Preservers' Association, the writer asked that coal-tar creosote be retained on the free list of the tariff. Mr. Sterling explained that only about 30 per cent of the creosote used in this country is produced in the United States. There is an actual shortage in the European market and prices have increased sharply in the last few years, promising to go still higher. Mr. Sterling