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discussion as possible at earliest date

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POLYPHASE SYSTEMS OF GENERATION, TRANSMISSION,  
AND DISTRIBUTION.

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(Read before the Electrical Section, November 15th, 1906.)

Every electrical development possesses some typical peculiarities which should be the determining factors in the selection of the frequency of the system as a whole, as well as the selection of the generating and distributing systems as to phases, that is, whether it should be two or three phase.

These are the problems with which we will concern ourselves in the discussion of polyphase systems, with a transmission line of 100 miles or less and pressures up to and including 50,000 volts at the receiving end. While the paper is limited to these two considerations alone, the ground to be covered is rather wide, requiring therefore a concise treatment of various characteristics.

It is but natural that a system with a railway load principally will call for a layout which will not answer best the needs of a lighting and power company, and a development where the power is to be used for some particular application may again call for a layout differing from the two mentioned above.

Every system is, therefore, influenced in its design by the nature of the load, and while a purely railway system will prove most economical and satisfactory with a given frequency, and two phase synchronous converters at the substations, lighting and power companies will require a different frequency and strictly three phase