

HISTORY ON THE CHANNEL
YOUR MONTHLY NEWS FLASH

F O J D C M

FRIENDS OF THE JUNEAU DOUGLAS CITY MUSEUM

The Daily Alaska Dispatch

FOURTEENTH YEAR — MORNING EDITION

JUNEAU, ALASKA, Thursday, October 18, 1918

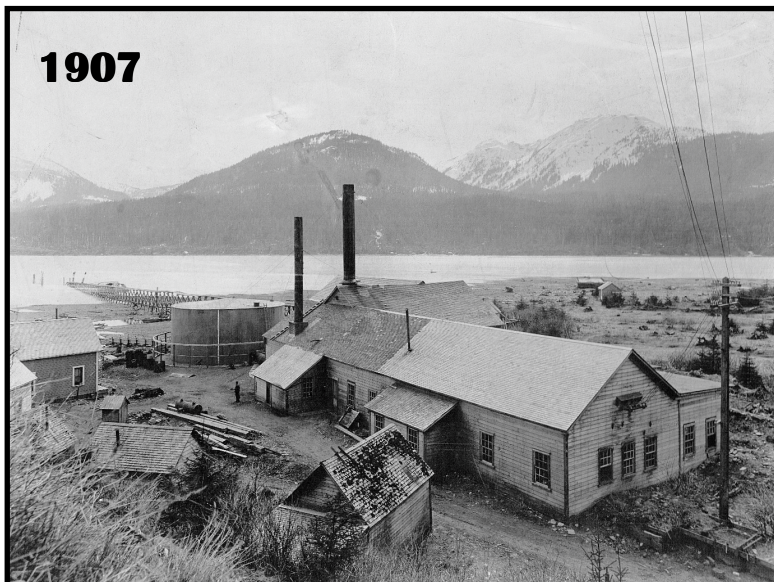
NUMBER 304

LIGHT COMPANY WORKING UNDER HIGH POWER

NEW SYSTEM IS BEING INAUGURATED IN PLANT

Six O'clock This Evening Will Witness Completion of Improvements to Power System

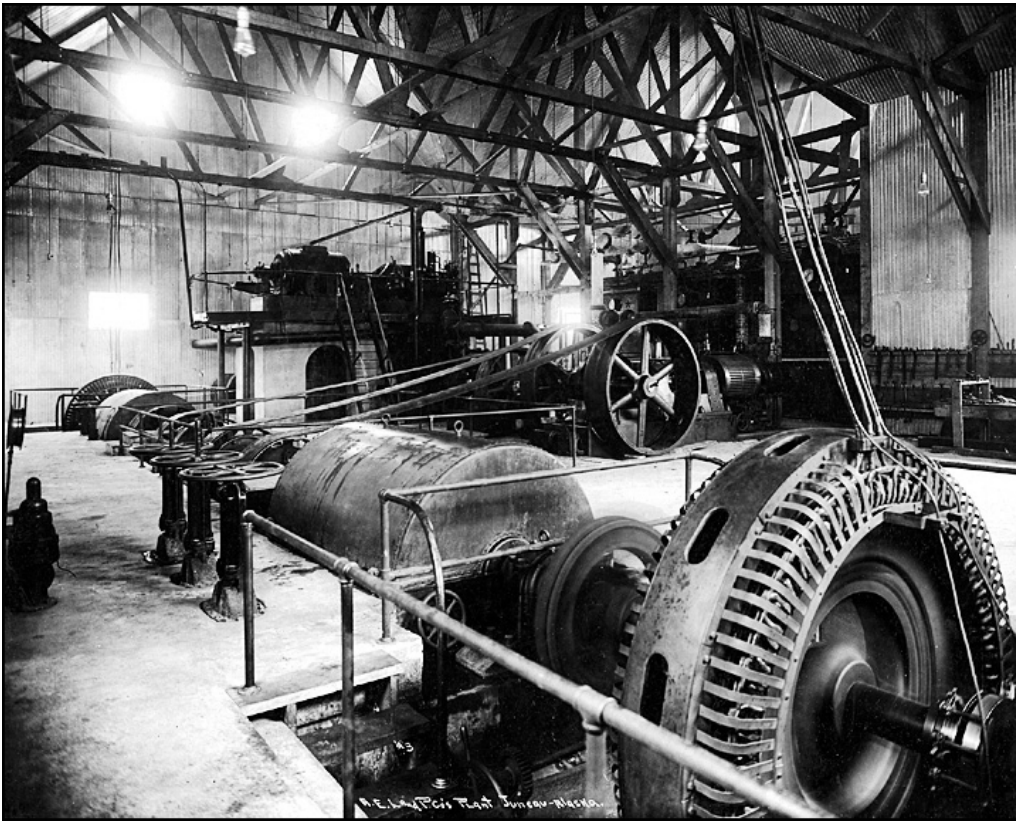
October 18, 1918 —The new installation by the Alaska Electric Light and Power Company at their Gold Creek plant, which will be completed by 6 o'clock tonight, consists not only of a change from the present 133-cycle* to 60-cycle current, but from a single- to a three-phase current as well.



The original (1893) Gold Creek Plant was a dual hydro/steam facility located at the edge of town, in "North Juneau". It furnished the backbone of the city's power supply, a whopping 800 kilowatts. Most of our mines were powered separately. AEL&P



The Gold Creek plant, looking down to Capital Avenue from the "Fosbee" stairs. From 1914, the original plant (see left) was modified and expanded in stages to its current installed diesel/hydro capacity of 75,000 kW. The hydro turbines operate only in the Spring to Fall interval, when Gold Creek's flow is sufficient. AEL&P



Interior of the plant, 1914. These units are noteworthy in that the generators could be shifted between steam and hydro power, depending on demand and Gold Creek's flow..

AEL&P

The change was made for the benefit of the large motors now quite generally in use in Juneau and has the advantage over the single-phase 133-cycle current in that it is not only the accepted standard throughout the country, but has more power as well. The three-phase 60-cycle has a much greater starting torque. It can carry a much greater load than the single-phase 133 cycles.

The Dispatch, although able to issue this evening, has been seriously handicapped as a result of its motors being out of commission. The large press, which has been forced to run on water power, has kept the linotype machine idle a large part of the time, so that there is necessarily less composition in this evening's issue than usual.

*Today, virtually all household and industrial power is "alternating current" (AC). This feature allows the current to be transformed in voltage, which in turn facilitates transmission from the generator to the powered device. The current reverses (alternates) from positive to negative at a specified frequency. The unit of frequency measurement is the Hertz (Hz), or cycle per second.

In North America today, the standard frequency is 60 Hz. Elsewhere, most of the current is 50 Hz. In the early days, before systems were interconnected, there was a great variety of frequencies, almost a "local option" situation. In lighting, frequency doesn't make much difference, but in motors, it's critical. Juneau's conversion to the North American standard was therefore a newsworthy event. Our mines and our city were striving for the modern.

But 133 Hz (actually $133 \frac{1}{3}$) seems a trifle weird. Explanation: early on, frequency was often measured in cycles per minute. AEL&P initially ran at 8,000 cycles per minute, single phase.

Single-phase, three-phase? That's another chapter.