

Subject: "ELECTRICAL ENTERPRISES IN CHINA"

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Submitted by: A. Viola Smith, Trade Commissioner.

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The Sino-Japanese hostilities of the past eighteen months have caused major disruption to electrical enterprises in eastern China and stimulated installations in western China mostly of evacuated equipment. Accurate information as to the complete extent which the industry has suffered is not available, hence this report will aim only at roughly sketching changes which have occurred insofar as data has become known.

BUREAU OF FOREIGN AND DOMESTIC INVESTIGATION  
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FILE No.

At the close of 1936 there were 456 electrical plants in China Proper with a combined generating capacity of 596,986 kilowatts, producing 1,685,055,000 k. w. h., representing an investment of yuan 301 million with an estimated annual turnover of yuan 96 million. Production in k. w. h. was 17.8% above 1935. Of total 1936 output, about 60% was used for industrial purposes, which was 25% above amount employed in 1935 for such use.

TABLE OF ELECTRICAL PLANTS BY PROVINCES, 1935.

(Statistics of Electrical Enterprise Regulation Board, National Construction Commission, Nanking, December, 1935. Latest data available by Provinces).

29  
22  
24  
23

Province	No. of Plants	Capacity, k.w.	Production Units (thousands)	Capitalization Yuan \$ (in thousands)	Annual Business Turn-over (in thousands)
Kiangsu	108	105,628	251,844	41,500	82,855
Chekiang	105	32,811	45,073	13,038	4,695
Anhwei	29	4,762	7,781	2,164	898
Kwangtung	38	36,798	109,424	10,677	9,327
Fukien	27	11,369	22,897	5,247	1,975
Shantung	22	41,989	67,040	5,109	3,867
Szechwan	22	5,176	7,691	3,836	1,274
Hopei	16	27,479	49,950	16,260	6,067
Hupeh	16	19,846	59,721	4,930	3,163
Kiangsi	12	3,257	4,967	1,163	907
Kwangsai	12	2,858	4,250	1,273	502
Hunan	11	6,808	15,057	1,829	1,223

Province	No. of Plants	Capacity Kilowatts	Production Units (in thousands)	Capitalization yuan \$ (in thousands)	Annual Business Turnover (in thousands)
Shansi	8	5,534	6,529	1,767	514
Honan	7	2,056	2,788	1,400	417
Kansu	4	151	357	90	79
Yunnan	2	1,852	4,140	2,331	116
Suiyuan	2	608	2,231	596	282
Chahar	1	385	686	245	108
Kweichow	1	150	373	88	33
Sikang	1	25	40	21	7
Tibet	1	100	158	83	
	456	585,424	1,568,778	301,647	95,709

The greatest development of the industry had occurred in the coastal provinces. Over fifty percent of all plants were concentrated in Kiangsu and Chekiang, with about 23% of the total generating capacity and 20% of current produced. Most large plants in Kiangsu were centered at Shanghai and Nanking, the former city housing upwards of 80% of China's total industrial factories.

#### EFFECT OF HOSTILITIES

##### NORTH CHINA:

In the Tientsin region, 14 electric light plants have been "taken over" by Japanese interests. In May, 1938, a 30,000 k. w. Japanese power station was officially put into operation at Tientsin. The Tientsin Power Company capitalized at Yen 4 million and the East Hopei Power Company capitalized at Yen 3 million, were reported in January, 1939, to be affecting a merger into the North China Power Company to supply electricity to Peiping and Tientsin.

At Tsinan, the provincial capital of Shantung Province, the 8,000 k. w. provincial electric plant was taken over by Japanese interests in 1938 and is now operated by a subsidiary of the North China Development Company.

A Domei despatch dated Peking, February 12, 1939, states that the North China Development Company will establish two subsidiaries to supply current to Shantung cities. At Tsinan, the Shantung and Tsinan Electric Company will

be formed with yen 4 million capital, ...  
East Shantung Electric Company capitalized at Yen 2 million is to be organized in Chefoo.

CENTRAL CHINA:

Throughout 1938 large groups of leading Japanese power concerns visited Shanghai to inspect prospects of developing electrical enterprises in the Japanese occupied areas in Central China. The outcome of these visits was the formation of the Central China Development Company.

The Central China Development Company inaugurated as a semi-official Japanese Concern on November 7, 1938, capitalized at Yen 10 million, has created a number of subsidiaries to control industries, commerce and communications in Central China. The Central China Power & Water Company was organized as one of its subsidiaries on June 30, 1938, with a capital of Yen 25 million, of which Yen 7-1/2 million was to be contributed by Central China Development Company, Yen 2-1/2 million by Japanese private electrical companies, and Yen 15 million to be made up of properties of former Chinese owned electrical plants in Lower Yangtze Valley which had been "taken over" by Japanese military authorities. Seven electrical plants in the Shanghai area, formerly Chinese owned, were taken over by Japanese interests in December, 1938, amongst which were the following, several of which were most modernly developed of Chinese enterprises.

Chapei Electricity and Waterworks, Ltd., Shanghai, established 1924 by Chinese interests, capital yuan 4 million, capacity 22,500 k. w. Badly damaged during 1937 hostilities and subsequently taken over by Japanese authorities; restoration work carried out by engineers brought from Japan. One unit now operating; other two units reported to require factory repairs.

Chinese Electric Power Company, Shanghai, established 1918 by Chinese interests, capital yuan 6 million. In 1935 produced 45,691,000 k. w. h. units

Total consumers 48,587. Taken over by Japanese interests and in partial operation.

Pootung Electricity Company, Shanghai, established 1919; capital yuan 1 million. Total consumers 11,124. Capacity 600 k. w., most of current purchased from other plants. Planned to erect a 10,000 k. w. unit. Taken over by Japanese.

Hsiang Hua Electricity Co., Shanghai (Chapei). Capital yuan 25,000. Did not operate own plant but drew supplies from other concerns. Used 4,864,000 units in 1935.

Hangchow Electric Company, Hangchow, established 1929; reorganized and developed along modern lines in 1933. Capacity 15,000 k. w. Damaged by retreating Chinese armies in 1938 and subsequently taken over by Japanese authorities and put into partial operation.

Capital Electricity Works, Nanking, established 1911. Capital yuan 6,400,000; capacity in 1936 was 32,000 k. w., with plans for bringing up to 50,000 k. w. Had over 40,000 consumers. Taken over by Japanese, Chissuyen, near Wuchin, Kiangsu. Established in 1923, later in 1928 taken over as government enterprise by Chinese Government. Capacity 17,000 k. w. Supplied important industrial districts; had plans for 20,000 k. w. extension.

Soochow Electric Co. Capacity 12,000 k. w. Taken over by Japanese interests.

The electrical enterprises in the Shanghai area taken over by Japanese interests, although resuming service to some extent, are unprofitable as yet, owing to the colossal destruction of industrial properties and evacuation of population. The Chinese people have been slow to resume industries or to start up new ones in the Japanese occupied areas, hence there is little possibility of furnishing other than lighting power.

At Canton the Municipal Power plant constructed in 1937 at a cost of US \$ 2,730,000., destroyed in October, 1938, is being dismantled by builders in an effort to salvage something out of the wrecked machinery.

The old power plant in the city, though considerably damaged in October, was at close of year under repair by Japanese forces.

The electric plant at Shekki near Macao, was wrecked by Japanese aerial bombardment on January 9, 1939.

#### WESTERN CHINA:

The National Resources Commission of the Ministry of Economics has moved 18 dynamos, with a total capacity of 3,430 k. w. from various war areas since July, 1937, some of which have been installed in western China points and are now in operation.

The Commission has invested upwards of yuan 3 million for the establishment of new power plants and the enlargement of existing ones.

#### DISPOSITION OF DYNAMOS REMOVED FROM WAR AREAS:

340 k. w. Diesel from Changsha, Kiangsu, taken 2,000 miles up Yangtze River and placed with Szechwan-Hupeh section of Electric Power Department of the Commission.

140 k. w. Diesel from Tayeh Iron works, Hupeh, installed in an industrial city in Western Hupeh.

One 340 k. w. Diesel from Tayeh placed in a power plant in Hunan; while two others of same type sent to Kunming, Yunnan, to enlarge its two 2,000 k. w. turbine engines.

200 k. w. engine installed in a Yangtze port in western Szechwan for the salt factories, to be augmented by a 2,000 k. w. dynamo in near future.

Three 100 k. w. dynamos removed from Kuikiang in July, 1938. One found its way to Southern Shensi, becoming the first power plant on the Szechwan-

Shensi Highway. One was moved to a paper industrial city, after a journey of 2,000 kilometers, came to rest at Lanchow, the provincial capital of Kansu. This city is now served, besides an original plant and the Kiukiang machine, with a 130 k. w. engine from Hankow, and a 120 k. w. engine from Nanchang, Kiangsi.

Four dynamos were moved from Changsha, Hunan. A 500 k. w. turbine dynamo was installed in western Hunan to provide extra power to an important iron works. A neighboring city now has a 240 k. w. engine for its coal mines. Kweiyang, the capital of Kweichow Province has taken over two 160 k. w. engines, in addition to which two 500 k. w. turbine engines have been ordered for it by the Commission.

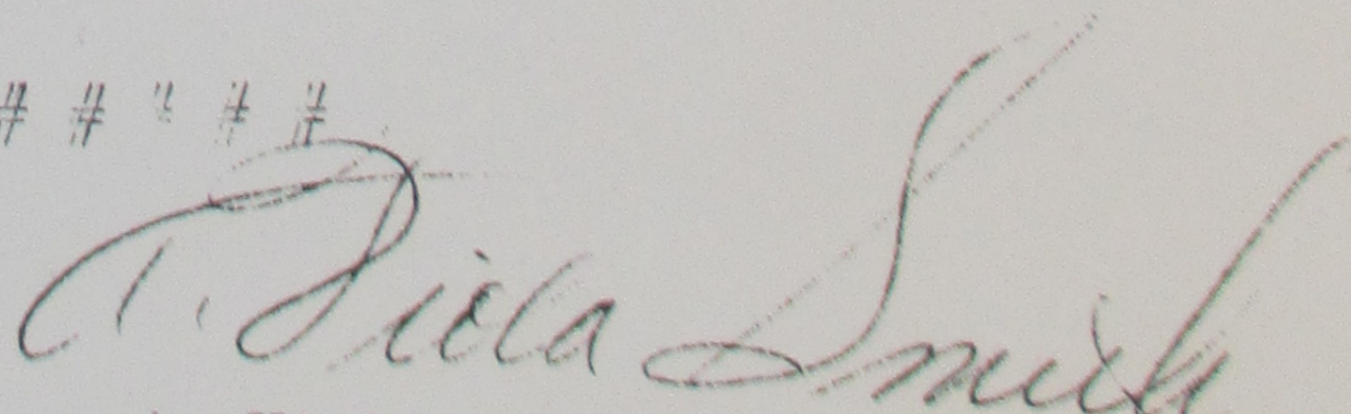
FOREIGN CONCESSION, SHANGHAI:

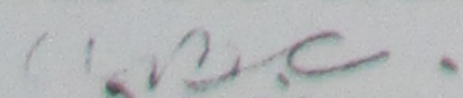
Electricity rates in the foreign concessions at Shanghai have been advanced to partially offset the 45% decline in the value of Chinese currency, which has so greatly increased operating costs.

The Shanghai Power Company, which supplies current in the International Settlement, has levied a 32-1/2% surcharge upon their normal rates as a temporary measure.

The Compagnie Francaise de Tramways et D'eclairage Electriques de Shanghai, which furnishes electricity in the French Concession at Shanghai, announced a 25% increase in power rates and a 15% increase in light rates, effective March 6, 1939.

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A. Viola Smith,  
Trade Commissioner.

Approved for Transmission:  
  
A. Bland Calder,  
Acting Commercial Attache.