

MEMORANDUM FOR: Deputy Director (Administration)

15 June 1953

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SUBJECT : Survey of Electric Power Facilities

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1. PROBLEM:

A survey was made of existing electric power facilities and they were found to be inadequate for present use, for future expansion, or under emergency conditions.

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2. FACTS BEARING ON THE PROBLEM:

a. The present demand is approximately 65 KVA (kilovolt amperes) although commercial supply is furnished through a 50 KVA single phase transformer.

b. Auxiliary power used for standby emergency service is supplied by a 60 KW single phase generator.

c. Single phase power limits horsepower of motors used in station operation is not as efficient as 3 phase which would properly balance loads.

3. DISCUSSION:

a. The present facilities are operating at an overload and with the continuing addition of communications equipment, the installation of the approved water supply system and the heavy demand which would be required under emergency conditions, the power now available is totally inadequate. This applies to both commercial and auxiliary power.

b. Increase in power demands from the Virginia Electric and Power Company would result in the conversion from single phase to 3 phase supply. Conversion to a 3 phase system would provide more efficient operation.

4. CONCLUSIONS:

The power supplied by the Virginia Electric and Power Company and by standby station equipment is not adequate for normal or emergency operations.

5. ACTION RECOMMENDED:

That \$15,000 be authorized to increase commercial and standby electric power facilities in accordance with recommendations listed in Annex A.

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2. FACTS BEARING ON THE PROBLEM:

a. Auxiliary standby power is not presently available for all facilities at

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b. The diesel generator which has a capacity of 250 KW has a present load of 100 KW and, therefore, does not operate at maximum efficiency.

3. DISCUSSION:

a. The 250 KW diesel generator installed at [redacted] is connected only to Station buildings and not to the other four points of power distribution. There is no standby power for the main pumping station, the emergency water pump at the city reservoir and the tower area where the [redacted] Building are located.

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b. Standby power at all points on the Station could be provided by purchasing the transmission facilities of the Utility Companies and the purchase of additional wire and transformers. The 250 KW generator will give the total necessary emergency power, will require only one attendant at one point, and will provide more steady and reliable current for longer periods of time than can be supplied by individual generators.

4. CONCLUSIONS:

a. That the buildings at the tower site, the water pumping station and emergency water pump [redacted] are of a critical nature and should be provided with auxiliary power.

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b. That the most economical and practical method of providing this needed protection would be the purchase of the existing electrical transmission lines and providing necessary additions.

5. ACTION RECOMMENDED:

That \$18,000 be authorized to purchase equipment from the utility companies and provide standby power to all facilities at [redacted] in accordance with Annex B.

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/s/

[redacted signature]

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RECOMMENDED:

CONCURRENCES:

DEPUTY DIRECTOR (ADMINISTRATION)

OFFICE OF COMMUNICATIONS

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LOGISTICS OFFICE

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