



TO: A. J. Doyle  
J. R. Miller  
D. T. McPhee  
L. C. Rasmussen  
J. M. Evans  
J. A. Mayberry  
J. L. Hogan  
F. L. Branca  
R. H. Graham ✓  
M. C. Mandacina  
R. B. Sullivan

FROM: B. J. Beaudoin

DATE: August 3, 1984

Attached is the latest summary and action plan regarding our review of the steam business. It incorporates comments received subsequent to Mr. J. R. Miller's distribution of the first draft on July 24, 1984.

BJB/lis  
Attachment

DIST COML OPERATIONS

AUG 6 1984

R. H. GRAHAM

CONFIDENTIAL

BJB34 D-1

OFFICIAL CASE FILE  
PUBLIC SERVICE COMMISSION

Exhibit No. 25  
Date 4-28-87 Case No. HPL189  
Reporter Dyke

## REVIEW OF STEAM BUSINESS

### BACKGROUND

Studies of the KCPL steam business conducted in 1981 and 1982 indicated that steam rates to the downtown steam customers would have to be raised substantially in order to cover operating costs and earn a reasonable return on steam plant investment. The studies also indicated that the retirement in 1990 of electric production facilities at Grand Avenue would increase costs allocated to the steam business and therefore, require further steam rate increases. Analyses of projected steam load scenarios concluded that the addition of a large high load factor steam customer could help alleviate the need for downtown steam rate increases at least until retirement of the electric facilities at Grand Avenue.

Subsequently in 1982 KCPL filed a downtown steam rate increase with the MPSC and concurrently began negotiating a high use and load factor steam contract with Corn Products, International which would more than triple annual steam sales. Upon signing of a contract in 1983 with CPC having a term of five years beginning in April, 1984 and agreement by the MPSC in KCPL's last electric rate case not to change its allocation procedures between electric and steam, KCPL withdrew its filed steam rate case. It was then anticipated that the addition of CPC revenues based on projected steam demand and contractual rates would cover the shortfall from the downtown customers so that KCPL's aggregate steam business would not sustain further operating losses. KCPL's contractual steam rate to CPC included recovery of certain boiler improvements

by KCPL at Grand Avenue and CPC invested about \$3 million in a steam line from Grand Avenue to CPC's property across the Missouri River.

CPC's demand for steam was projected to be a constant load of 250,000 lbs. per hour but actual experience to date has been loads averaging 180,000 lbs. per hour with rapid load variations of as much as 60,000 lbs. per hour. This has resulted in actual plant operations deviating significantly from those projected when the CPC contract was executed.

In June of 1984 CPC informed KCPL of its intent to sell its manufacturing plant to National Starch to whom CPC would like to assign its steam supply contract. National Starch has indicated an interest in renegotiating the contract at a lower rate for a ten-year period based on an average of 115,000 lbs per hour of steam demand -- about one half the contractual CPC steam demand. Such terms would substantially lower KCPL's steam sales revenues compared to the existing CPC contract.

In KCPL's last electric case, completed in July 1983, the MPSC ordered the Company to file its plan to phase-out the electric generating facilities at Grand Avenue. A study committee has recommended that the Grand Avenue electric facilities be retired upon the commercial operation of Wolf Creek scheduled for 1985. This phase-out of the electric facilities in 1985 accelerates the re-allocation of operating and maintenance costs and plant investment to the steam business.

The projected lower steam demand from National Starch even at the negotiated CPC rates and the anticipated re-allocation of Grand Avenue electric costs to the steam business without an upward rate adjustment to National Starch or the downtown steam customers is expected to put KCPL into an operating loss position for steam operations.

### ACTION PLAN

In view of these changing circumstances, the management of KCPL recommend the following actions:

1. System Power Operations explore any further reductions in steam operations and maintenance costs and boiler efficiency improvements that can be effected at Grand Avenue station including shutdown of a standby boiler for eight months of the year. Rough estimates of all of the above indicate that some costs could be eliminated but not a sufficient amount to offset the shortfall in projected revenue. However, a standby boiler is required in the current CPC contract. It is needed, too, to provide reliable service to downtown customers. Without it, the consequences on reliability of service to steam customers would be severe.
2. Allow CPC to assign the steam contract to National Starch for the same five-year term and steam rate or offer an alternate proposal to National Starch for conversion to an electrode boiler operation.
3. The Commercial Operations Division explore with CPC the possibilities of adding other high load factor steam customers on CPC property at similar terms and conditions of the current contract (term no longer than five years). Offer this as an incentive to CPC in recovering its investment in the steam line and the possibility of KCPL reducing its steam rates to National Starch by spreading steam costs over more sales units of steam.
4. KCPL wants to retain the downtown steam customers as "energy customers" of KCPL. Rough estimates indicate a potential for 176 million KWH of winter sales and 113 MW of winter peak demand. The Commercial Operations Division undertake a detailed marketing study of the downtown

steam customers to develop a plan for converting these steam customers to electric energy as a primary source of their energy requirements. The study should consider, but not be limited to, the following factors: types of equipment and space required to supply steam for specific customer applications (heating, cooking, etc), purchase or lease arrangements, projected steam and electric rates, competitive gas prices, and other conversion incentives. The study should also consider conversion of steam loads by areas to expedite abandonment of sections of steam distribution facilities.

5. Rough cost of service studies reflecting the retirement of Grand Avenue electric facilities and the prospect of reduced demand to National Starch indicate that a rate increase to the downtown steam customers may be required. The Rate Department should consider filing a steam rate case with rates effective upon the retirement of the electric facilities at Grand Avenue.

6. In view of the five-year time horizon in the CPC contract, the upward pressure on steam rates, and the prospect of having to invest considerable amounts of capital to upgrade an old and deteriorating downtown steam distribution network, KCPL will no longer encourage the connection of "new" steam customers to the downtown network.

CONFIDENTIAL