ST. JOSEPH LIGHT & POWER COMPANY
ALLOCATION PROCEDURES
CASE NO. EO-94-36

VI. EXPENSES - FUEL

A. Fuel and Daily Ash Expense Allocations

SJLP'S procedure outlined in the January 28, 1994, paper entitled "Exergy-Based Electric and Steam Allocation Procedure for Lake Road 900# Plant Fuel and Auxiliary Power" (hereinafter referred to as the "Exergy Approach") should be used for the basis of allocations. (See Attached Report dated January 28, 1994 and marked Schedule 7).

Daily ash removal expenses will be allocated as described on the attached report dated April 14, 1994. (See Operation and Maintenance Expense Allocation. See Attached Report dated April 14, 1994 and marked Schedule 8).

B. Auxiliary Electric Power Allocation

The method of determining the amount of auxiliary electric power to be allocated to industrial steam and to electric users will be that method presented in the January 28, 1994, paper on the "Exergy Approach" (See attached Schedule 7). The auxiliary electric power will be priced using the average system energy cost ($/MWH) for each month, which includes all Lake Road Plant and Iatan generation costs, fuel handling expenses, and all purchased power expenses. Additionally, the Company's average purchased capacity cost ($/MW) will be used to price the demand. An average monthly demand of 2 MW will be used. Billing considerations and accounting for the auxiliary electric power charges will be treated through "steam transfer credits", rather than direct billings.

AUXILIARY POWER ALLOCATION

The allocation of auxiliary power is performed in the following manner. First, the auxiliary power which can be attributed directly to industrial steam or electric is subtracted from the total 900 psi plant metered auxiliary power, leaving an allocable quantity. Auxiliary power which is metered elsewhere in the plant, but benefits the 900 psi plant is added to the allocable amount. This result is then allocated by the fuel allocation factor (x, see the fuel allocation procedure). Auxiliary power which is directly attributed to each demand is then added to the allocated quantities.

Included in the auxiliary power attributed directly to each constituency is a daily base power consumption. The base usage for the total 900 psi plant is approximately 7.5 MWhr per day. This corresponds to an idle but ready plant (no industrial steam sales and no electric generation). The 7.5 MWhr is allocated between steam and electric using the Steam Demand Allocation Factor, which is defined in Appendix II of the Plant and O & M Allocation Procedure.

The process is summarized in the following steps.

1. Meter the daily auxiliary power (kwhr) used by the 900 psi plant via house service transformers #1 and #2, and #3 standby transformer, call this P_{900}.

2. Determine the 900 psi auxiliary power which is 100% electric (e.g. condensate and circulating water pump motors, cooling tower fans, substation power, and base station power for electric), call this P_{e1}. These auxiliaries are estimated from hourly motor current readings, test data, and the allocation of the total base station power.

3. Determine the 900 psi auxiliary power which is chargeable directly to the industrial steam system, P_{s1}. This quantity is the sum of the base station power for steam and the power consumed by various pumps for the benefit of industrial steam. The pump power consumption is that required for well

water pumps, softener booster pumps, treated water make-up pumps, and attemperating water pumps. The total pumping energy quantities are calculated from water flows, pressures, and appropriate test data. Pumping energy for the water treatment function is allocated 96% to industrial steam, based on the 1994 plant water use study prepared for the MPSC Case EO-94-36.

4. Determine the portion of P_{900} which can be allocated, $P'_{900} = P_{900} - P_{e1} - P_{s1}$.

5. Determine the auxiliary power consumed by Boiler 5 precipitator (supplied from the Unit 5 auxiliary transformer), P_{5p} = K1 x number hours Boiler 5 is on burning coal, where K1 is the average kilowatt load drawn by the Boiler 5 precipitator.

6. Estimate the power consumed by #3 and #8 coal belts to deliver coal to the Boiler 5 coal bunkers, P_{38} = K2 x number of tons of coal delivered to Boiler 5 bunkers. K2 is the average kwh required to transport one ton of coal from the reclaim pit to the Boiler 5 bunkers.

7. Meter the daily auxiliary power used by the rotary dumper, #6 and #7 coal belts, and related equipment supplied by #7 auxiliary transformer. Determine the amount allocated to steam by multiplying by the Plant Coal Burn Allocation Factor. Designate this power as P_{sc}.

8. Total auxiliary power charged to steam is calculated as $P_s = x_s(P'_{900} + P_{5p} + P_{38}) + P_{s1} + P_{sc}$, where x_s is the fuel allocation factor for steam.

9. Total auxiliary power charged to electric is the difference between the total plant auxiliary power and P_s.