

Assignment

Metropolitan Collection Company (MCC) garbage trucks currently wait an average of 6 minutes each trip before being able to dump their load. MCC is considering hauling to a different collection center at an extra cost of \$8 per trip for each truck. The new center can process the loads at a constant rate of 30 units per hour. Arrivals at the new center will be Poisson-distributed, with an average rate of 24 loads per hour. The system is a single-channel, single-phase system with unlimited queue length. If waiting time for the trucks is valued at \$200 per hour, how much of a savings per hour would result?