

LIFE CYCLE OWNERSHIP AND CROSSOVER ANALYSIS

Blue Star is starting a new distribution service that delivers auto parts to the service departments of auto dealerships in the local area. Blue Star has found two light-duty trucks that would do the job well, so now it needs to pick one to perform this new service. The Ford TriVan costs \$28,000 to buy and uses regular unleaded gasoline, with an average fuel efficiency of 24 miles per gallon. The TriVan has an operating cost of \$.20 per mile. The Honda CityVan, a hybrid truck, costs \$32,000 to buy and uses regular unleaded gasoline and battery power; it gets an average of 37 miles per gallon.

The CityVan has an operating cost of \$.22 per mile. The distance traveled annually is estimated to be 22,000 miles, with the life of either truck expected to be 8 years. The average gas price is \$4.25 per gallon.

Blue Star applies Equation (S5-2) to evaluate total life cycle cost for each vehicle:

Total life cycle cost = Cost of vehicle + Life cycle cost of fuel + Life cycle operating cost

- a) Based on life cycle cost, which model truck is the best choice?
- b) How many miles does Blue Star need to put on a truck for the costs to be equal?
- c) What is the crossover point in years?