OPERATIONAL COST/ CARBON FOOTPRINT COMPARISON

TOYOTA PRIUS vs. NISSAN VERSA S PLUS

Greenhouse Gas production / based on 12000 miles per year – EPA estimates:

(Projected – vehicles not in service/purchased)

2014 Nissan Versa S Plus – 35 combined MPG........................................... 3.04 Metric Tons CO2/year
2014 Toyota Prius – 50 combined MPG......................................................... 2.13 Metric Tons CO2/year

Difference between Toyota Prius and Nissan Versa S Plus...................... 0.91 Metric Tons CO2/year

(Actual – vehicles in service)

2007 Toyota Prius – 36 MPG................................................................. 2.96 Metric Tons CO2/year
2008 Toyota Prius – 37 MPG................................................................. 2.88 Metric Tons CO2/year
2009 Toyota Prius – 39 MPG................................................................. 2.73 Metric Tons CO2/year
Average for Toyota Prius model years...................................................... 2.86 Metric Tons CO2/year

2013 Ford Focus – 32 MPG................................................................. 3.33 Metric Tons CO2/year
2013 Ford Focus – 38 MPG (average long trip / highway)......................... 2.80 Metric Tons CO2/year
2013 Ford Focus – average local and long trip...................................... 3.06 Metric Tons CO2/Year

Average difference between Prius and Focus (local and long trip)........... 0.20 Metric Tons CO2/year
Vehicles to be replaced by new vehicle purchase:

2000 Chevrolet Cavalier – 22 MPG Combined (EPA estimate).............. 4.84 Metric Tons CO2/year

Replacing (50) 2000 Cavaliers with (50) 2014 Versa sedans would decrease Westchester County’s Carbon Footprint by 90 Metric Tons CO2/year.

Comparatively, replacing (28) 2000 Cavaliers with (28) 2014 Prius sedans would decrease the County’s Carbon Footprint by 75.88 Metric Tons CO2/year.

Purchasing Versa sedans over Prius sedans creates a win-win situation for the County and environment. The infusion of 50 vehicles removes the same amount of older inefficient vehicles from the County’s rolls, decreases fuel consumption and reduces the Carbon Footprint by 14.12 Metric Tons CO2/year as compared with the purchase of (28) Prius sedans with the same funds.

Will an increase in fuel prices justify the $10,000 premium for purchasing a Toyota Prius over a Nissan Versa S Plus?

Again, based on a 12000 mile year, a 2014 Nissan Versa S Plus @35 MPG combined is projected to use 343 gallons of fuel.

A Toyota Prius with the same timeframe @50 MPG combined is projected to use 240 gallons of fuel

At present day County price for a gallon of unleaded regular gasoline is $2.92.

Annual fuel cost for a Nissan Versa S Plus would be $1001.56
Annual fuel cost for a Toyota Prius would be $700.80
Per year savings for a Toyota Prius $300.76

With this fuel cost savings it would take 33.25 years to recoup the difference for the higher priced Toyota Prius. Even if we had a price increase up to $5.50 per gallon, it would take 17.7 years to break even.

What are the differences in maintenance cost for a hybrid vehicle versus a non-hybrid vehicle?

Basic maintenance for the two different types of vehicles is comparable with the exception of possible traction battery replacement in 8-10 years and high voltage repairs in the hybrid. These exceptions would potentially make the hybrid vehicle more expensive to maintain in the long run.