

The Georgia Department of Natural Resources (DNR) is the state agency charged with managing and conserving the state's natural resources. DNR consists of 2,000 employees, a \$250,000,000 budget, and a fleet of 1,337 vehicles. Our group has identified a carbon reduction strategy focused on reducing CO2 emissions and increasing fuel efficiency across DNR's vehicle fleet by implementing a policy requiring vehicles to be replaced with more fuel efficient powertrains or hybrid models.

## Problem Statement

DNR currently has no formal replacement policy to address fleet vehicle emissions or fuel efficiency. Base-model powertrains are typically purchased for all replacement vehicles, while more fuel efficient alternative powertrains exist.

## Our Goal

## Implement a Vehicle Replacement Policy

Featuring more fuel efficient powertrains and models

Comparable or better features necessary for job performance

## Feasible and Sustainable Options

Positive NPV Value

Potential Initial Savings

Significant Carbon Emission Reduction

## Example Policy

Car Options

- Fusion Hybrid or Focus SUV Options

- Explorer EcoBoost or Escape SEL

Truck & Van Options

- EcoBoost Option

## Current Status

- DNR received \$500,000 for 16 vehicles in the amended FY 18 budget earlier this year. Vehicles are already selected for this cycle.
- Focus on next budget cycle → target highest NPV vehicles first to receive buy in for more widespread adoption in future years
- Key stakeholder and project champion has been identified. DNR leadership must articulate plan to Office of Planning & Budget for further consideration by General Assembly.
- Sell with common sense arguments: "Even investing in 5 EcoBoost Explorers would have effect of taking emissions of 10 Explorers off the road while saving \$15,000 in the process over 10 years".

- DNR fleet vehicles are eligible for replacement after 10 years or 135,000 miles
- Currently 38% (506 vehicles) are eligible for replacement
- Our findings for *Current Eligible Vehicles Over 10 Years*:

13.5 Million  
LBS CO2  
Reduction

\$1.6 Million  
NPV

\$210,000  
Initial Savings

Equivalent to  
taking 61 cars  
off of the road

Save Tax  
Payer Money

Reduce  
Carbon  
Footprint

Support DNR  
Mission of  
Sustainability

Long-term,  
Eco-friendly  
Policy



Ford Fusion Hybrid

- 31% Emission Savings per Year
- \$4,900 NPV (10 Years), 3.7 Year Payback Period
- 68,000 LBS of CO2 Savings



Ford Focus

- 8% Emission Savings per Year
- \$4,000 Initial Savings
- 18,000 LBS of CO2 Savings



Ford Explorer EcoBoost

- 11% Emission Savings per Year
- \$4,800 NPV (10 Years), 2 Year Payback Period
- 35,000 LBS of CO2 Savings



Ford Escape SEL

- 25% Emission Savings per Year
- \$4,000 Initial Savings
- 76,000 LBS of CO2 Savings