Overview

- Project Goals
- Recommendations
- Analysis/Sensitivity Study
- Conclusions
Project Goal: Minimize Environmental Impact

- High Fuel Efficiency
- Low Landfill Disposal

Recommendation: All-Aluminum Vehicle

- Fuel Efficiency: 24.5 mpg
- Total Private Cost per Car: $13,050
- Weight Landfilled: 706.5 lbs
Analysis Methods: Assumptions

- Production Volume: 150,000 vehicles/year
- Discount Rate: 10.4%
- Aluminum Price: $1.50/lb
- Gasoline Price: $4.00/gallon

Optimistic FE Equation
Sensitivity Analysis: Production Volume

![Graph showing sensitivity analysis of production volume.](image-url)
Other Sensitivity Analyses

- Insensitive to Discount Rate (under 35%)
- Steel Vehicle is Competitive When:
  - Aluminum Price = $5.00/lb, or
  - Fuel Price = $0.50/Gallon
Conclusions

- Recommended Choice is All-Aluminum
- Use Phase Dominates Private Costs
- Recommended Choice is not Sensitive to Production Volume, Fuel Cost, Aluminum Price, or Discount Rate

Policy Recommendations

- Consumer Education
- Estimated Lifetime Costs on Sticker
- Government Loans for AI Car Manufacturing