

Engineering Economics Group Project:

Engineering Economics Project: Overview

- Exploring the Economic Merit of Hybrid Drivetrain Vehicles
- What is a hybrid drivetrain?
 - Generally, multiple sources of power for propulsion
 - Currently, limited to vehicles using both
 - Electrical motor
 - Internal combustion engine

Photos of cars removed for copyright reasons.

Engineering Economics Project: Scope

- Question:
 - Should you purchase a hybrid or other fuel efficient vehicle?
 - Considering economic conditions only
 - Considering other factors
 - What would effect this decision? How significant are these factors?
 - How long does the car last?
 - How much does gasoline cost
 - ...
- Scope: Each group should analyze the economic merit of at least three vehicles
 - Hybrid drivetrain -- Your own vehicle
 - Other high efficiency option



Massachusetts Institute of Technology
Department of Materials Science & Engineering

3.080 Econ & Enviro Issues In Materials Selection
Randolph Kirchain

Engineering Economic Analysis: Slide 3

Engineering Economics Project: Deliverables Due October 6

- Presentation: 15 minutes - Done as Group
 - Describe the scope of your analysis
 - What did you consider?
 - Results
 - What is the economic merit of
 - Sensitivity
 - What conditions / assumptions effect your results
 - Recommendation
- Spreadsheet - One per group
 - Excel data tables used to do sensitivity analysis above
- Writeup: 3-5pages - Done as Individual
 - Cover same topics as above
 - Brief description of the technology you are considering



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Engineering Economic Analysis: Slide 4