

Cost Task 2017

Preamble:

For this year's task, teams are to consider themselves as a stand-alone fictitious company located in their 'home country', with that country's current fuel costs, energy balance and product mix.

If your university presents more than one vehicle, this task will need to be completed considering each individual vehicle's team as separate entities, not a conjoined unit.

Given the compressed timeline to the 2017 competition, consideration is given to teams in 'right sizing' their work. A detailed cost analysis of alternatives is not expected, nor required. Teams should focus on the discussion points and tradeoff analysis; cost data should be estimates only.

A handout of the information that you discussed with the judges is appreciated.

Based on feedback from previous years, a more detailed marking breakdown for the Cost Task is included at the end of this document for your reference. This will be used to mark all presentations at the 2017 event.

Task Body:

Management wishes to review the propulsion type of your vehicle, noting the following points:

- The mix is progressively leaning toward electric power in this racing category
- A social push away from Internal Combustion in passenger vehicles, including some governments mandating to 'ban' IC vehicles in the coming decades
- Market penetration of electric powered passenger vehicles in Australia and many other markets worldwide has not yet met projections/expectations.

The key information that your management wishes you to present to them, with an explanation for your choice is:

1. Discuss the attribute tradeoff between IC and EV powertrains, specifically focusing on the following points, which management has identified as strategic priorities:
 - Vehicle cost to the company
 - Profit margins (cost, sell price, volume)
 - Brand image
 - Perceived value, quality and performance to the weekend racer
2. If your stand-alone company were to develop BOTH IC and EV vehicles, what strategies could be utilized to minimize cost for both vehicles? Consider strategies that minimise development, tooling and piece price costs.
No cost data is required at this stage, just the identification of strategies to minimize cost over two vehicle types.
3. What propulsion type will you recommend to your management to adopt for the 2018 and 2019 seasons, based on the above analysis? This may differ to what you have adopted for your entry to this competition.

Appendix:

System Understanding	
Technical understanding of alternate proposals	5
Understanding of flow-on effects to other systems and/or assemblies	5
Cost Reduction Assessment	
Customer-centric focus on attribute tradeoff	2
Understanding non-Cost Event effects (eg. Capital investment, perceived performance, etc)	2
Clarity of weighted trade off analysis / decision matrix	3
Recommendation clearly communicated	3
TOTAL - SECTION 3	20