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# ***Comments on GFEI Progress Report***

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## *What are realistic prospects for ultra-efficient vehicles?*

- **Onroad vs. test fuel efficiency – higher efficiency vehicles seem to have stronger adjustment factors; more vulnerable to high accessory loads**
- **Will ultra-efficient vehicles be consumer-friendly?**
  - Engine downsizing with lower loads and turbo-charging is crucial to efficiency
  - Efficiency testing typically done with 2 passengers, light cargo
  - What happens in the real world?????
    - *Going on vacation with the family? How about 2 adults, 3 teenagers, full cargo....and why not put a canoe on the roof?*
    - *High load vehicles have lots of spare power.....but not so with our 90 g/km car of the future*

## ***Other issues I'm concerned about:***

- **Developing nations: future changes in fleet characteristics – With growing incomes, can we really avoid a drift to larger, more luxurious (and less efficient) cars?**
- **Tires play a crucial role in efficiency – we need measures to ensure that replacement tires are as good as OEM tires**
- **If we “need” plug-in hybrids to achieve our goals – we desperately need major gains in batteries *and* a low carbon grid**