Which Is Greener: Idle, or Stop and Restart?
Comparing Fuel Use and Emissions for Short Passenger-Car Stops

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Testing at 21°C on a late-model mid-sized American car shows that:

- Idling for more than 10 seconds uses more fuel and emits more CO₂ than engine restarting
- Idling fuel usage varies from 0.2 - 0.5 gal/h for passenger cars
  - increases with vehicle size and idle speed
- Criteria pollutant emissions are low for idling following catalyst activation
- Emissions from restarting are small compared to those from cold-starting
- The catalyst cools slowly so restarts after a short stop will not incur cold-start emissions