

DOCKETED

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Automated and Intelligent Systems California Energy Commission

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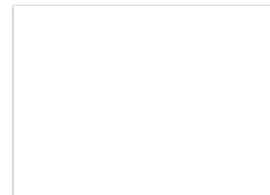
3 Revolutions Future Mobility Program

Institute of Transportation Studies at UC Davis

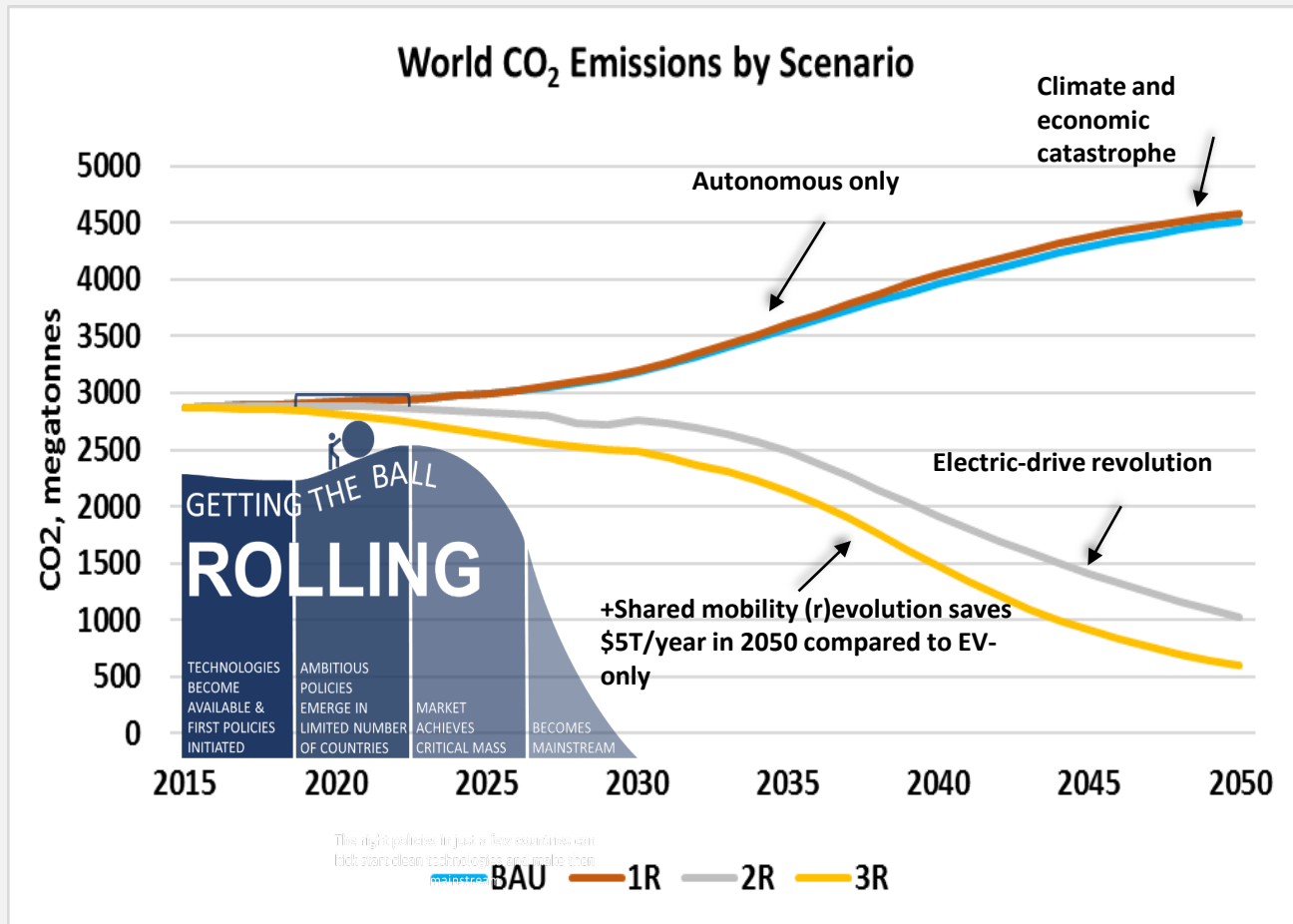
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Climate Findings



Key takeaway: This best case 3R scenario envisions a future that could **reduce CO₂ by 80%** compared to a “business-as-usual” scenario or even a “1R” scenario with automated but mostly single occupant.

(Eggart, Sperling 2018)

State Level Automation Policy

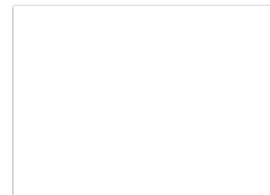
- Mostly states only passed preliminary policies (e.g. exploratory committees, definitions)
- CA is the only state with legislation that addresses AVs and emissions for fleet operators
- Urgent policy gap for regulating emissions of privately owned AVs and partial automation already resulting in increases to VMT.



([Fleming 2020](#))

Best Opportunities for Aligning Automation with Environmental Goals

1. AV Fleet electrification
2. Pricing Travel
3. Data Sharing
4. Pooling



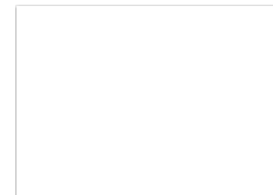
Will Pooling return? Or will Single-Occupant Travel Linger?

Begin with Risk Definitions:

- **Safety** is defined as being secure from **accidental harm**.
- **Security** is defined as being safe from **intentional harm**. ([Kurani 2019](#))
- **Personal risk constellations** are groupings of safety and security risks that are weighed against benefits to determine behavior. These vary by age, gender, etc. ([Grunwald 2016](#))

State Goal Is To Minimize Risks & Assess Tradeoffs

- The Pandemic will heighten risks for safety from other passengers
- AVs may address some of these risks, and add other risks
- Electrification reduces risks from environmental harms
- 3Rs travel will inevitably expand risk constellations
- **State should endeavor to address all risks and ensure there is equity, to avoid disparities of risks.**



Thank you

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