
INTERSECT 19
The New Energy Ecosystem

Grid-Integrated Vehicles in the Southeast

Core Team	GT Department
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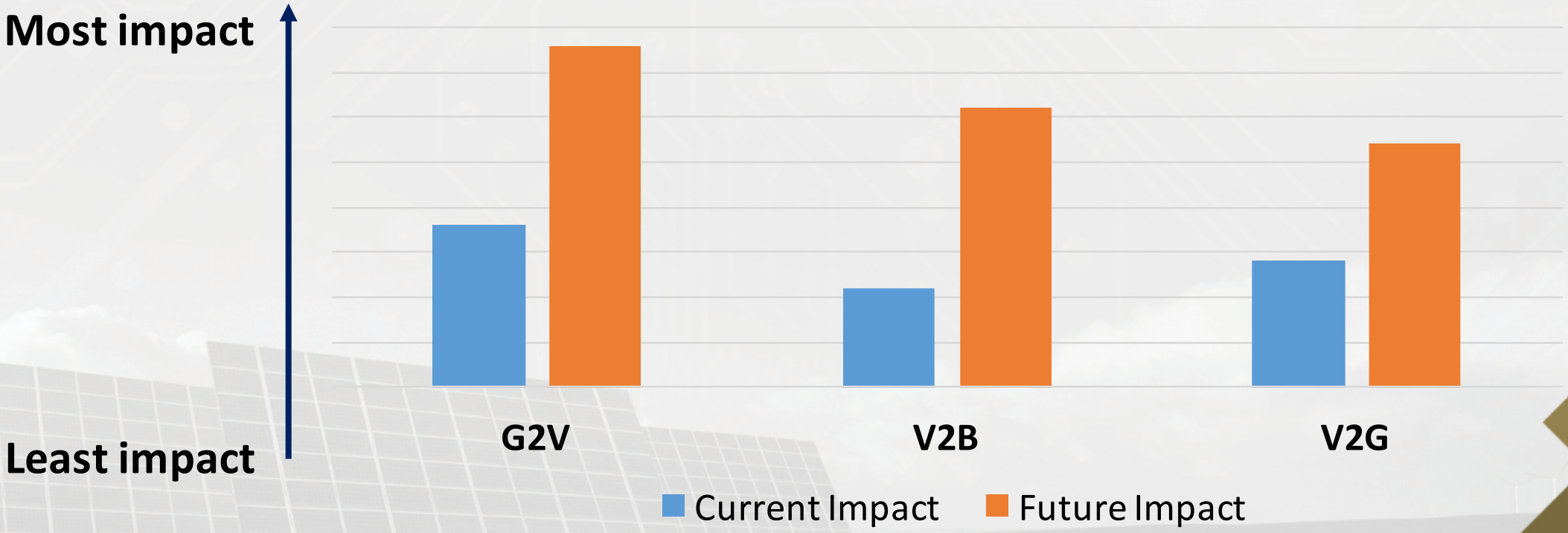
External Partners	Organization
Electricity Advisory Committee	U.S. Department of Energy
Chattanooga Electric Power Board	Tennessee Valley Authority Distributor

- *The Chattanooga Electric Power Board co-hosted a workshop*
- *The DOE Electricity Advisory Committee was surveyed*

Study Overview and Objectives

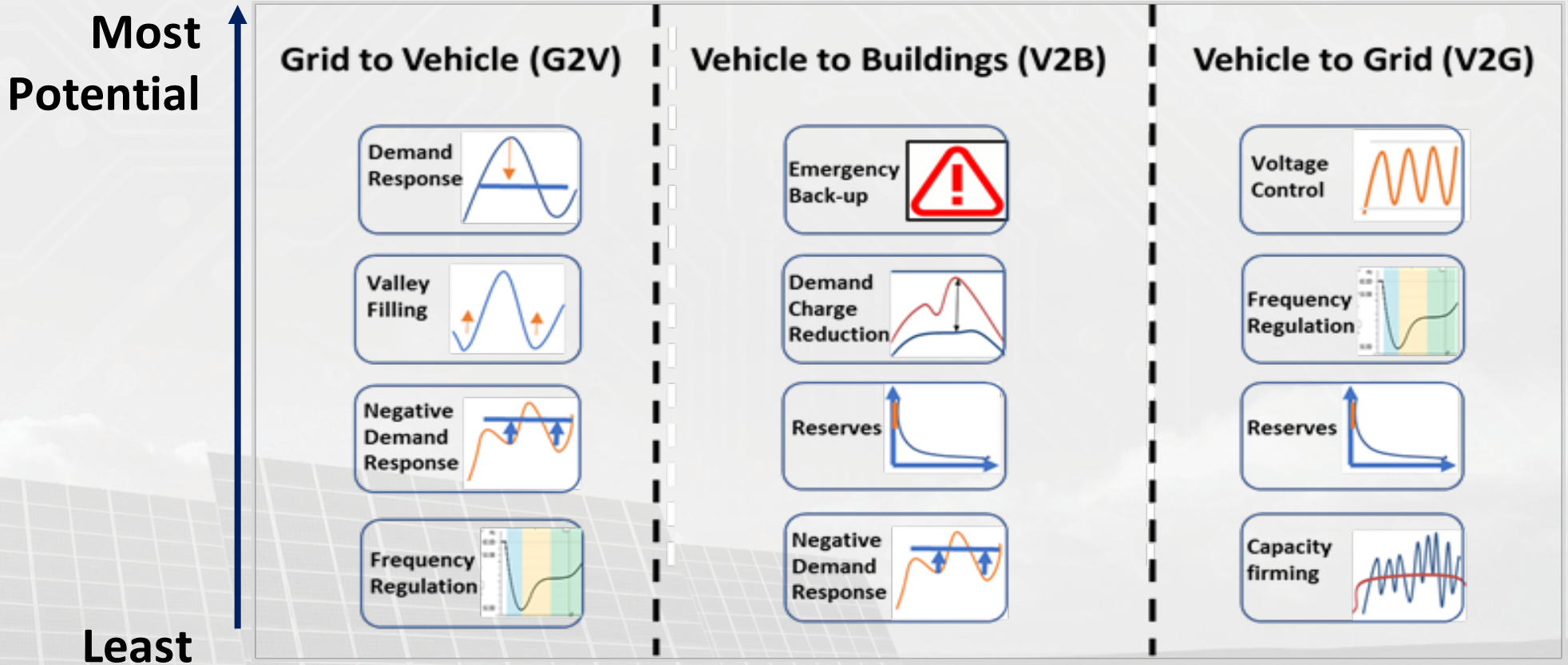
- Electrification of transportation
- Rise of mobility as a service
- Interconnection between the electric grid and transportation
- Research questions:
  - Is there value in leveraging the connection between transportation and the electric grid?
  - What modes exist for connecting the electric grid and the power sector?
  - Which stakeholders support/oppose linking the electric grid and the transportation sector?

Key Findings: Current and Future Impact of Different Modes of Integration



Question: "On a scale of 1 to 5, how would you rate the current impact of G2V, V2B, and V2G in your region? Please also rate the potential impact of these modes in your region."

Key Finding: Highest potential grid resilience services differ across modes of EV integration



Question: "Please rate the potential for G2V/V2B/V2G to provide the following services in your region."

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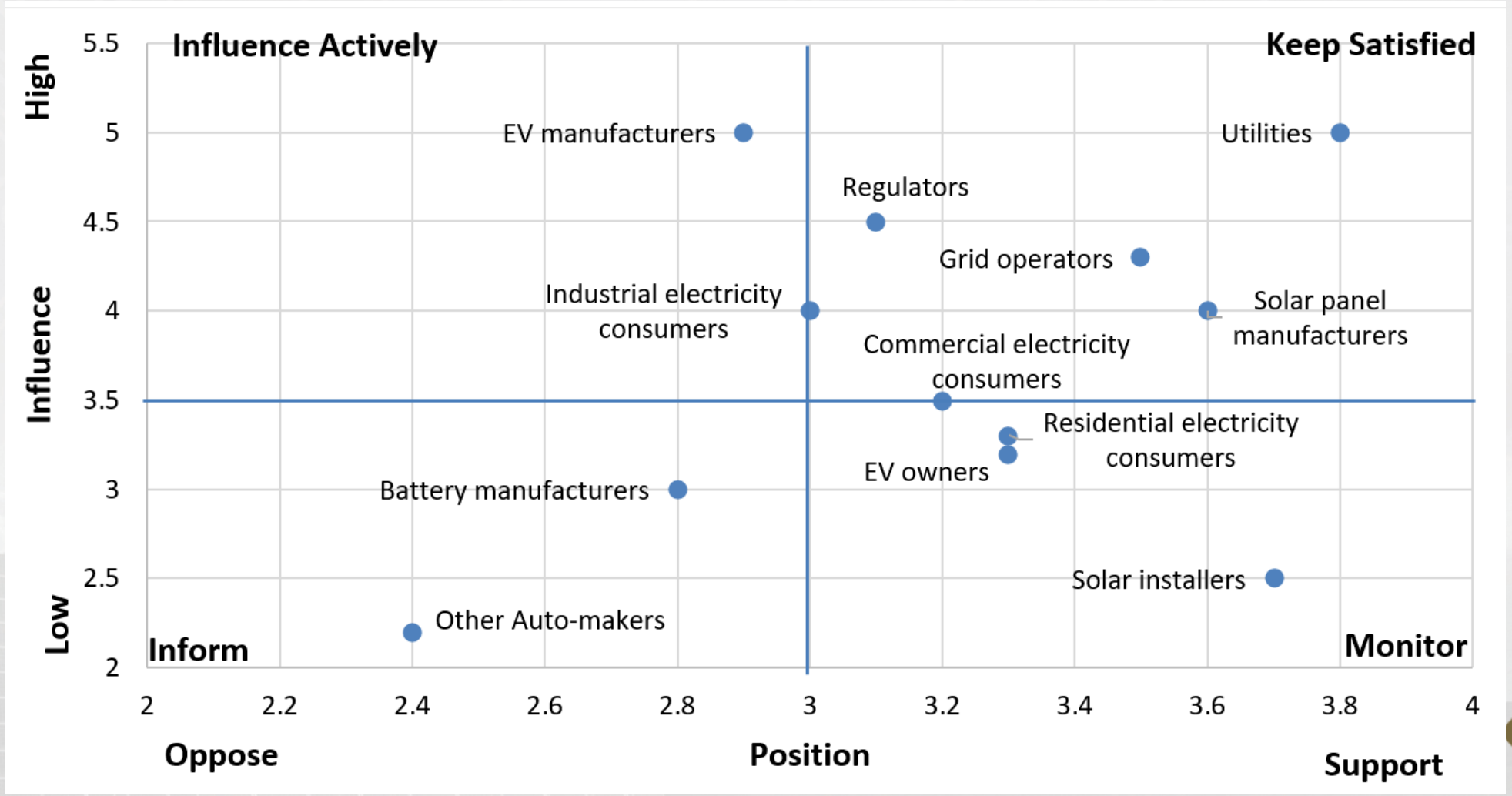
Key Findings: Stakeholder Opposition and Support Varies

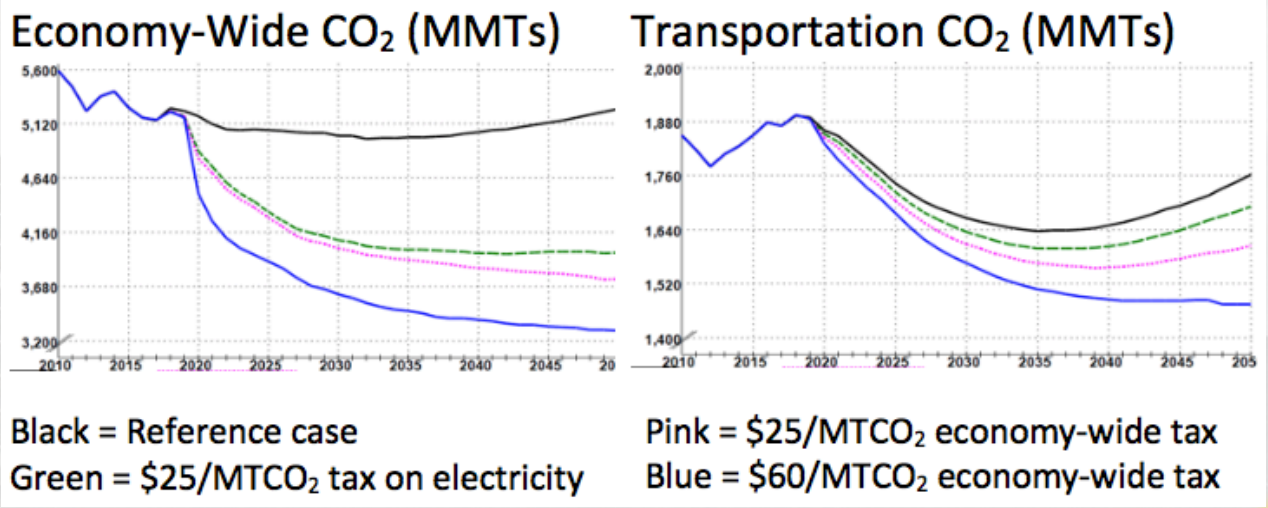


Question: "On a scale of 1 to 5, which stakeholders might oppose or support the deployment of all modes - G2V, V2B, and V2G?"

Next Steps

- Revise and Resubmit Journal Paper (*Energy Research and Social Science*)
- Solidify a collaboration with Southern Company, NRDC, and others, focused on: "Siting Electric Truck Charging Infrastructure in the Atlanta Metropolitan Area"
- Use GT-NEMS to analyze EV penetration when ancillary services are valued and with a more rapid learning curve for EV batteries – in the South Atlantic region vs. the U.S

The problem: CO_2 emissions from transportation are persistent.



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Georgia Tech Energy Policy and Innovation Center

Thank You

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