

AI-Grid

Planning the Future of Electrified Corridors

The Challenge

As transportation electrification expands, utilities, transportation agencies, and infrastructure providers need better ways to plan charging infrastructure, manage grid impacts, and build resilient, financially sustainable transportation networks.



Current planning tools often evaluate transportation and energy systems separately. AI-Grid brings them together.

What We're Building

AI-Grid is developing advanced planning and decision-support tools that integrate transportation demand, charging behavior, grid operations, and infrastructure investment strategies into a unified framework.

Expected outcomes

- ✓ Improve infrastructure planning decisions
- ✓ Better understand future charging demand
- ✓ Increase grid reliability and resilience
- ✓ Reduce deployment risk and uncertainty
- ✓ Identify high-impact investment opportunities
- ✓ Support scalable corridor electrification strategies

Key Focus Areas

- **EV Demand Modeling**
 - Forecasting charging needs using real-world travel, charging, and grid data.
- **Corridor Planning & Simulation**
 - Evaluating electrified transportation corridors before infrastructure is deployed.
- **Infrastructure Siting & Resilience**
 - Identifying optimal locations for charging and dynamic wireless power transfer while accounting for reliability and extreme weather.
- **Network Optimization**
 - Prioritizing high-value corridor segments for future investment.
- **Business Models & Market Coordination**
 - Exploring pricing, tariff, and demand-response strategies that support long-term operations



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with our research
teams!***

Help Shape the Future of Electrification

Seeking Engagement

- **Utilities & Grid Operators**
 - Load forecasting needs
 - Grid flexibility and resilience challenges
 - Demand response opportunities
- **Transportation Agencies & Corridor Operators**
 - Corridor planning priorities
 - Infrastructure deployment challenges
 - Performance and operational requirements
- **Technology Developers & Infrastructure Providers**
 - Deployment considerations
 - Technology integration needs
 - Commercialization pathways
- **Investment Partners**
 - Business model development
 - Economic feasibility considerations
 - Market adoption insights