EVGrid Assist: Accelerating the Transition
Comprehensive VGI Technical Assistance Initiative

A cross-DOE coordination and technical assistance effort focused on the interface between vehicle charging and the electric grid considering the full spectrum of the R&D, deploy, use, learn cycle.

**Purpose:**
- Increase stakeholder knowledge
- Drive actions to resolve VGI challenges and barriers
- Provide pathways for stronger VGI coordination

**Objectives:** Activate the community to
- Prioritize challenges to solve
- Accelerate planning and decision making
- Enable proactive infrastructure investments and supporting markets, rates and regulations
- More quickly achieve decarbonization goals
Vehicle Grid Integration (VGI) for Electric Mobility
Essential for Achieving Transportation and Power Sector Goals

Decarbonized | Reliable | Resilient | Cost-effective

ENABLED BY

- Renewable Resources
- Reliable Charging
- Sufficient Capacity
- Driver Behavior

- Communications & Controls
- Technical Standards
- Cyber Security

- Retail Rates
- Grid Services Markets
- Actionable Data

- Policy
- Transparency & Oversight
- Investment
Grid Services Categories – V1G, V2G

CUSTOMER ENERGY SERVICES
- Backup Power
- Increased PV Self-Consumption
- Demand Charge Mitigation
- Time Shifting Charging
- TOU Optimization
- Energy Arbitrage

OPERATIONAL GRID SERVICES
- Peak Load Shaving
- Voltage Support
- Frequency Regulation
- Load Shaping
- Spin/Non-Spin Reserve
- Emergency Power

ALTERNATE TERMINOLOGY
- Bidirectional Power
- Black-Start Capacity
- Capital Investment Deferral
- Deferred Upgrades
- Demand Reduction
- Demand Response
- DER Utilization
- Distribution Back-tie Service
- Distribution Congestion Relief
- Emergency Load Transfer
- Emergency Power
- Energy
- Firm Capacity
- Frequency Responsive Reserves
- Load Management
- Managed Charging
- Max Capacity Relief
- Outage Recovery
- Phase Balancing
- Power Quality
- Providing Capacity
- Ramp Reserves
- Reactive Power Support
- Regulating Reserves
- Renewable Energy Integration
- Restoration Services
- Transmission Congestion Relief
- Transmission & Distribution Deferral
A word about data....

- Data landscape is changing
- May require new data types and insights into customer behavior
- Could lead to challenges around access or privacy
- Multiple parties have different data
- Parties may want or need data that they don’t have
Infrastructure Morality?

- Empowers those with less
- Strengthens what binds us
- Democratizes energy