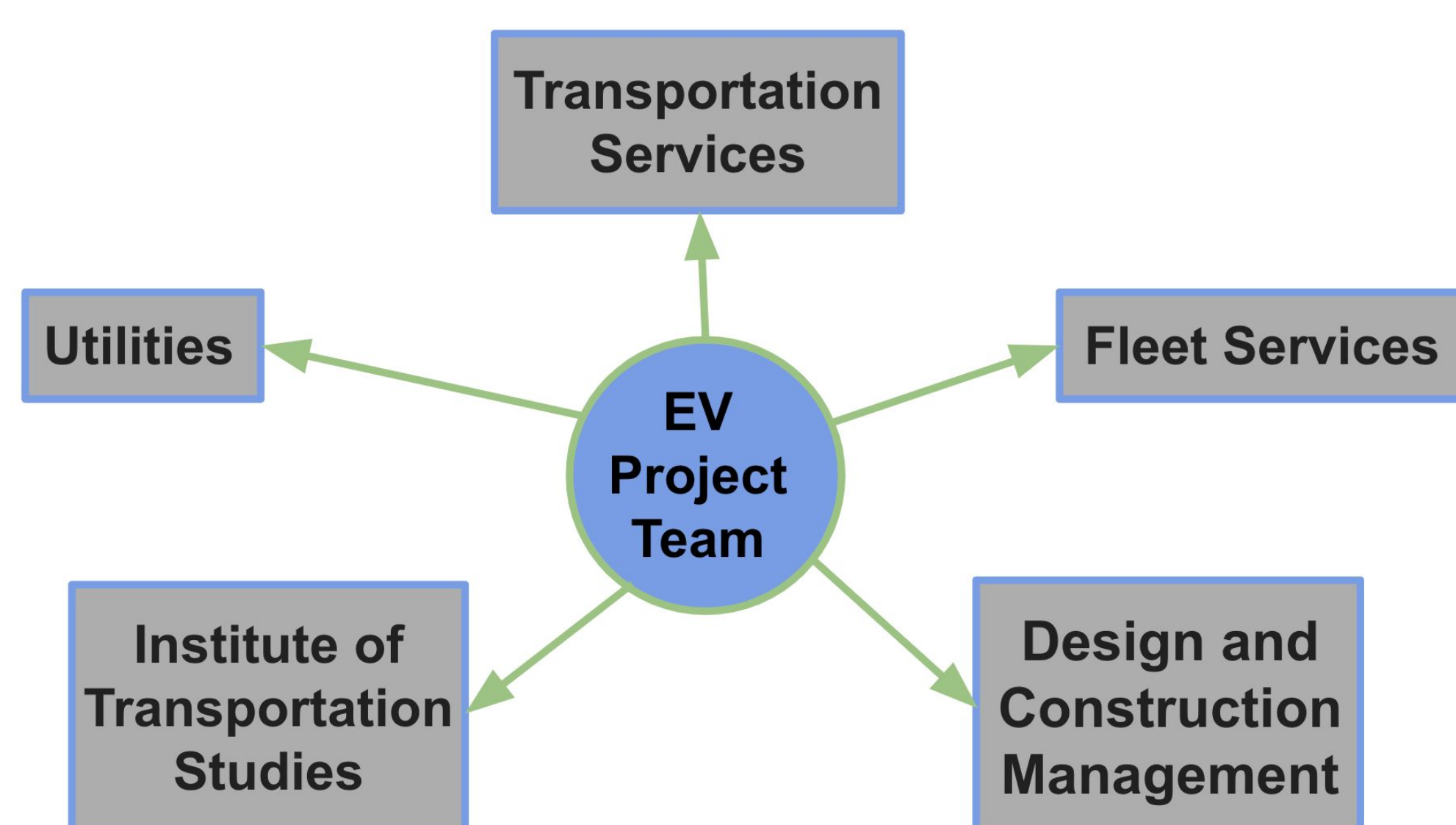


Scope of Work

- **Updated UC Davis EV Charger Report:**
 - **Part I:** Current/Future Projects, Optimal Locations, Billing Mechanisms, Charger Models, Department Recommendations
 - **Part II:** Our Recommendations (Charger Models, Billing Mechanisms, Pricing Policy), Urgency Assessment

Departments Involved

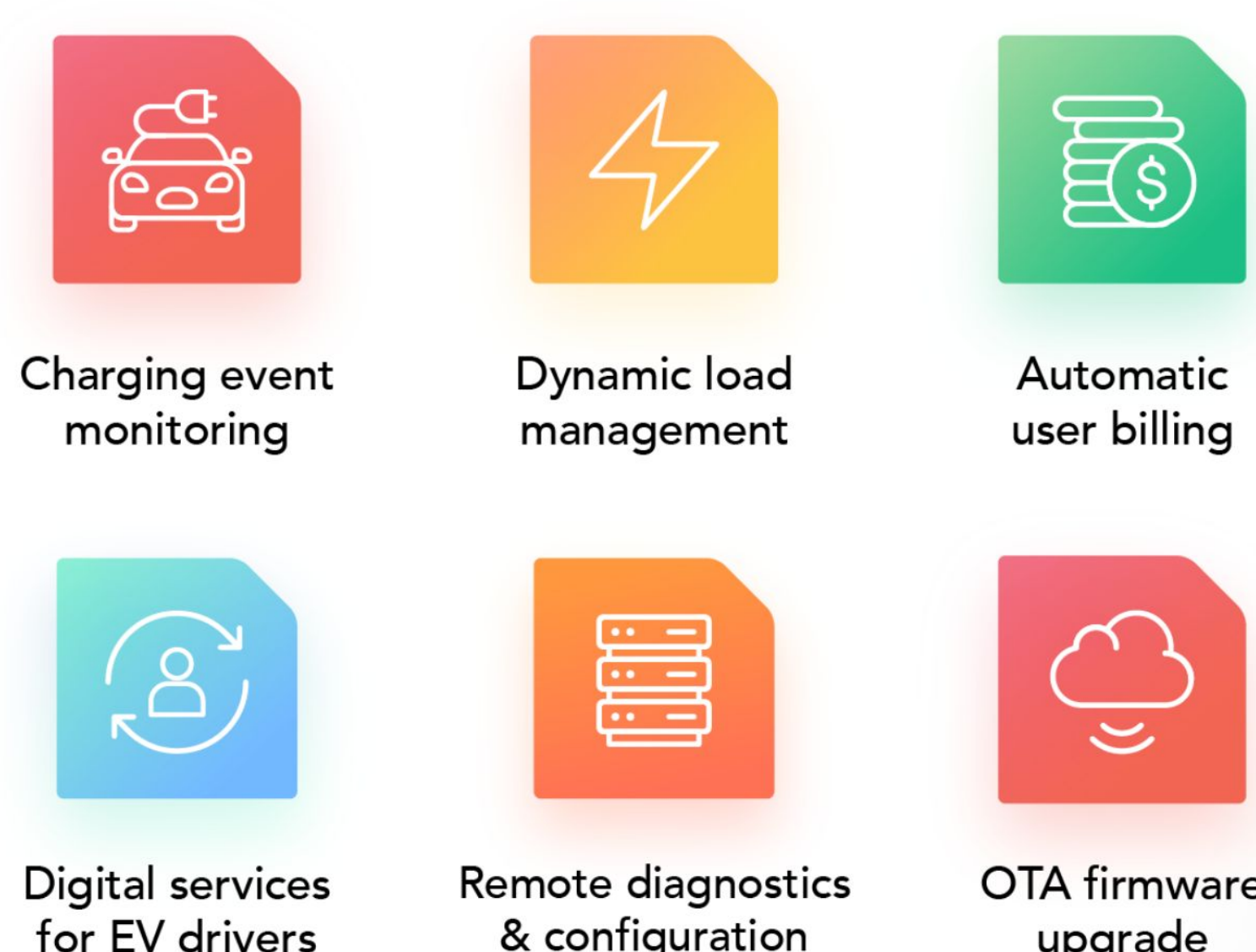


"Dumb" vs. "Smart" Chargers



Source: Green Power Systems

WHY SMART EV CHARGING?

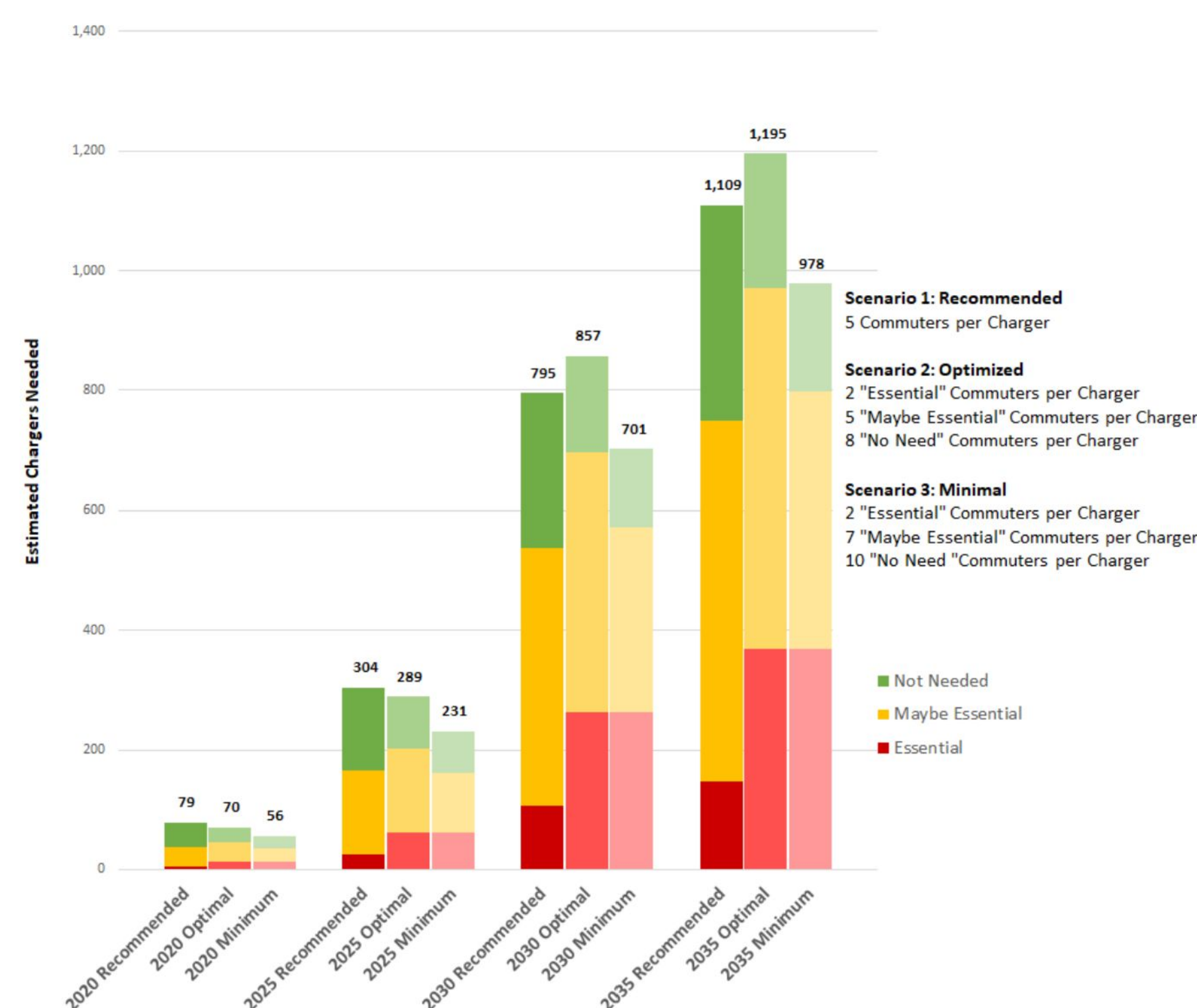


Source: EMnify

Background Information

- **Regulations:**
 - 2035 Zero Emission New Vehicle Sales Mandate (California Air Resources Board)
- **UC Davis Sustainability Goals:**
 - 50% of New Light-Duty Fleet Vehicles Purchased to be Zero-Emission or Hybrid by 2025
 - 4.5% of Commuter Fleet to be ZEVs by 2025 and 30% by 2050
 - Carbon Neutral by 2025
- **Current Infrastructure:**
 - 80 EV Chargers (64 ClipperCreek, 3 Lighthouse, 2 ChargePoint, 1 Tesla)
- **2021 Electric Vehicle Study - Affiliated Engineers & DKS Associates:**

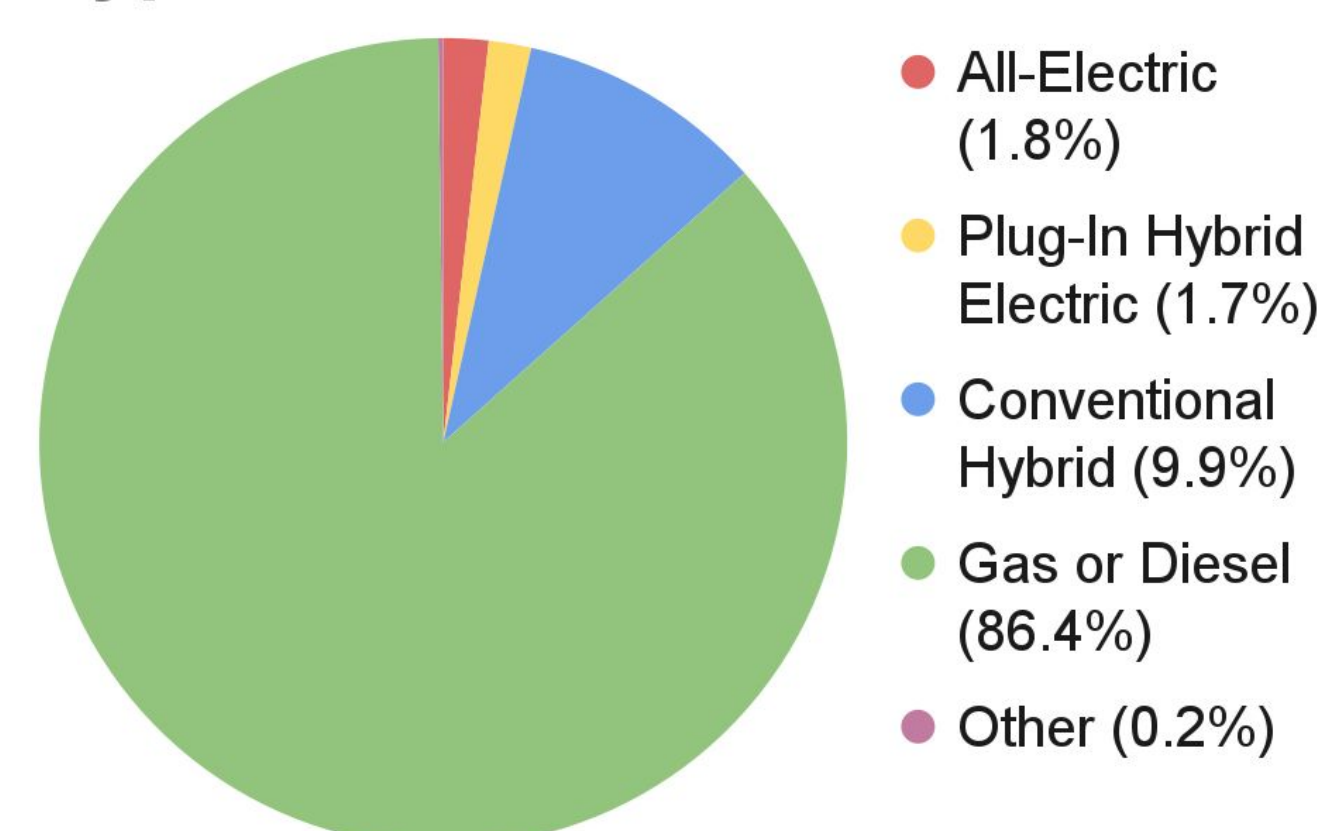
Number of Chargers - Recommended, Optimal and Minimal: 2020 to 2035



ITS Commuter Survey:

- Commuters Outside Davis: 24.4% (contribute 88.6% of total CO₂ emissions)

Type of Vehicle Used



Summary of Findings



Map of Cost-Effective Charging Locations by UC Davis Design and Construction Management

Needs:

- Rapid Expansion of Smart Level 2 Charging Infrastructure
- Pay per kWh Billing
- Replacement of ClipperCreek Level 2 "Dumb" EV Chargers

Concerns:

- Must Capture LCFS Credits
- UCD vs Commuting Vehicles Priority Use
- Lack of Interdepartmental Coordination
- Access Restrictions and Time Limits
- Ongoing Maintenance of Charging Stations

Limitations:

- Transformer Availability
- ADA Compliance Update Costs
- Stations Must Qualify for CALeVIP Grants

Recommendations

Recommended New EV Charger Locations			
Map Index #	Parking Facility	Address	# of Charger Ports
1	Lot 35	1050 Orchard Rd.	2
2	Lot 25	760 Orchard Rd.	10
3	Gateway Structure	600 Hilgard Ln.	10
4	Lot 1	254 Old Davis Rd.	10
5	Quad Structure	400 Howard Way	4
6	Pavilion Structure	685 Klieberhall Dr.	6
7	Lot 56A	426 Health Science Dr.	2
8	Lot 57	620 W. Health Science Dr.	10
9	Lot 47	375 Bioletti Way	10
10	Lot 49	740 La Rue Rd.	6
11	Lot 80	1333 Research Park Dr.	4

- Billing System: \$28-\$38 per kWh, App-Based or Card/Contactless Payment
- Priority of DCM Locations (see table above)
- Charger Model: ChargePoint Commonly Preferred Amongst Departments
- Upgrade "Dumb" Chargers to "Smart" Chargers (and/or Relocate "Dumb" Chargers "Behind the Fence" without Public Access)
- Funding Concerns (ADA Compliance/UCD Increase Allocated Funding)

Future Considerations

- Urgency of Charging Infrastructure
- Installation of Additional Transformers to Handle the Increased Electricity Demand
- "Behind the Fence" Charging Capacity for UCD Fleet Services
- Additional "Opportunity" Charging Sites
- Alternative Projects to Reduce Emissions (Expand Public Transportation)

Project Team

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