

# Infrastructure Considerations for Vehicle Electrification



# Understanding the Transportation Electrification Transition

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U.S. Total spend on  
**Electricity**

~ \$1B per day

U.S. Total spend on  
**Gasoline**

~ \$1B per day

# Residential



- The vast majority of residential EV charging will occur at the home
- Single family vs multifamily considerations
- Affects will vary widely depending on current state
- Good ability to control charging times

# Commercial



- Each situation is unique
- Likely mix of L2 and DCFC
- Some ability to control charging times

# Fleets



## Example: Distribution Center – Last Mile Delivery

- 100 Class 6 trucks
- 30 Class 8 trucks
- Site load today ~ 500 kW

### Electrified Depot

- Class 6 trucks: ~ 100 kWhs per day
  - 10,000 kWhs in 8 hours = 1250 kW (@ 100% LF)
- Class 8 trucks: ~ 400 kWhs per day
  - Overnight charging
    - 12,000 kWhs in 8 hours = 1.5 MW
  - Slip-seating (multi-shift)
    - 400 kWhs in 45 min = 500 kW per vehicle
    - Assume 4-6 vehicles charging = 2 – 3 MW



# ELECTRIFICATION



