• Setup: Growing Airport wide Electrification

Challenges:

- 1st Wave: Electric Vehicles, Buses
- 2nd Wave: 8 class and heavy-duty trucks
- 3rd Wave: Aviation
 - Urban Air Mobility (e.g. electric helicopters)
 - Regional Jets (8-12 passenger)

- o **V2G**
- Siting Energy Storage at Airports

• **Setup:** Charging vehicles

Challenges:

- Coordinated smart charging
- Interaction with grid (e.g. pricing signals)
- Significant load growth but with volatility of demand

- Information based dynamic charging model
- Coordinated with airport operations

Setup: Sustainability/Resiliency for greater Urban area

Challenges:

- Alignment with City/Regional sustainability plans
- Interaction with City resources to improve system resiliency

- Could excess/curtailed energy be utilized for greater related systems resiliency (e.g. energy storage -> hydrogen)
- Interactive Grid Buildings

Setup: Sustainable Aviation Biofuels (SAF)

Challenges:

Electrification of long-haul aviation not near term

- Utilization of SAF to improve resiliency position for longer term outages
 - On site generators

- Regarding resilience & and the decarbonization of airports, we must first address:
 - Coordinating alternative energy supply options:
 - Grid
 - On-site
 - V2G
 - Buildings
 - Energy storage
 - Diesels (SAF)