DOE EV Future
Designing the Infrastructure

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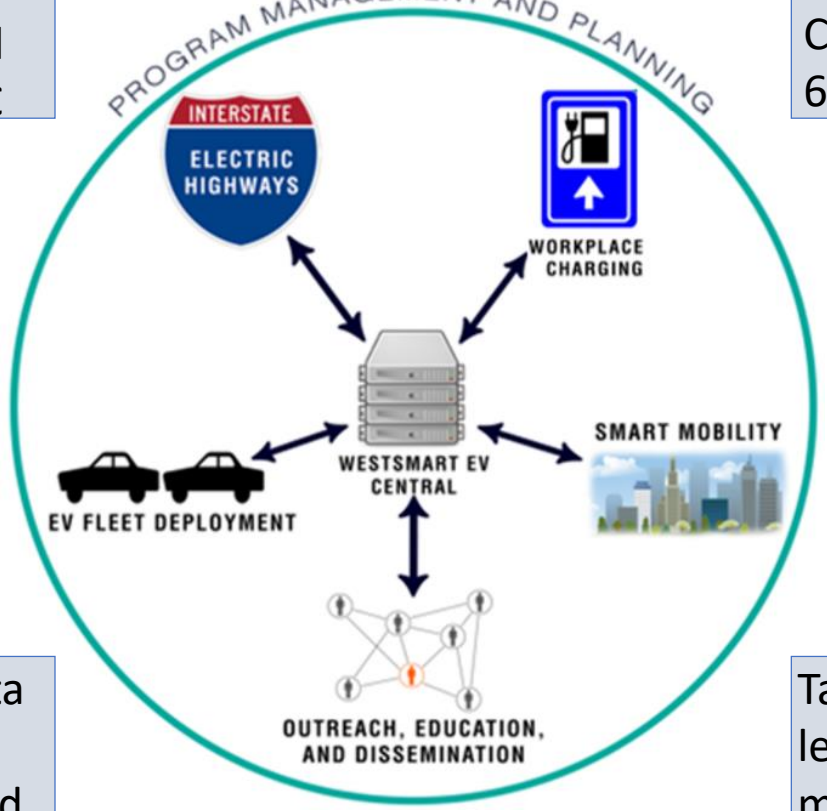
ROCKY MOUNTAIN POWER
POWERING YOUR GREATNESS

WSEV Community Project

Task 1 Electric Highways: 1,500 miles of electrified interstate with 65+ DCFC

Task 2 Workplace Charging: Workshops and 600+ L2 at work locations



Task 3 EV Adoption Pilots: Incentives for 200+ EV purchases

Task 4 Smart Mobility: All electric solutions in urban areas

Task 5 WSEV Central: Data collection, analysis, modeling, lessons learned

Task 6 Outreach: Lessons learned, dissemination, materials, workshops

Partners

UtahState University

INL Idaho National Laboratory

Salt Lake City

The University of Utah

UTA

Park City 1884

NREL

Breathe Utah

Flexcharging

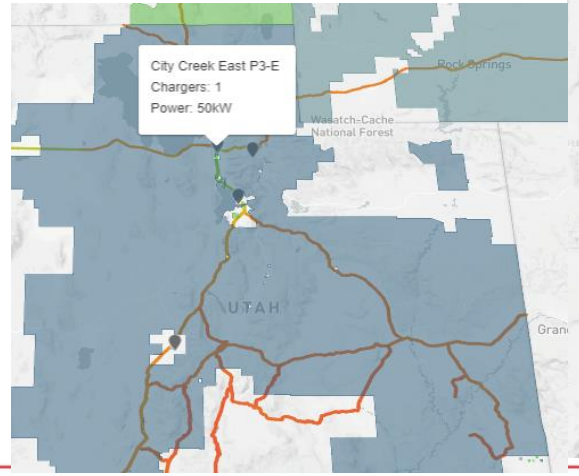
FORTH

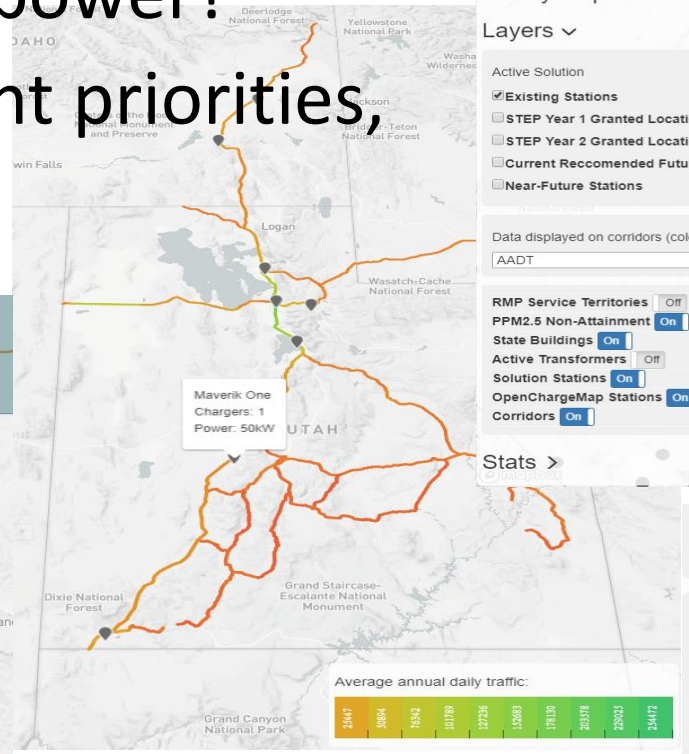
Utah Department of Environmental Quality

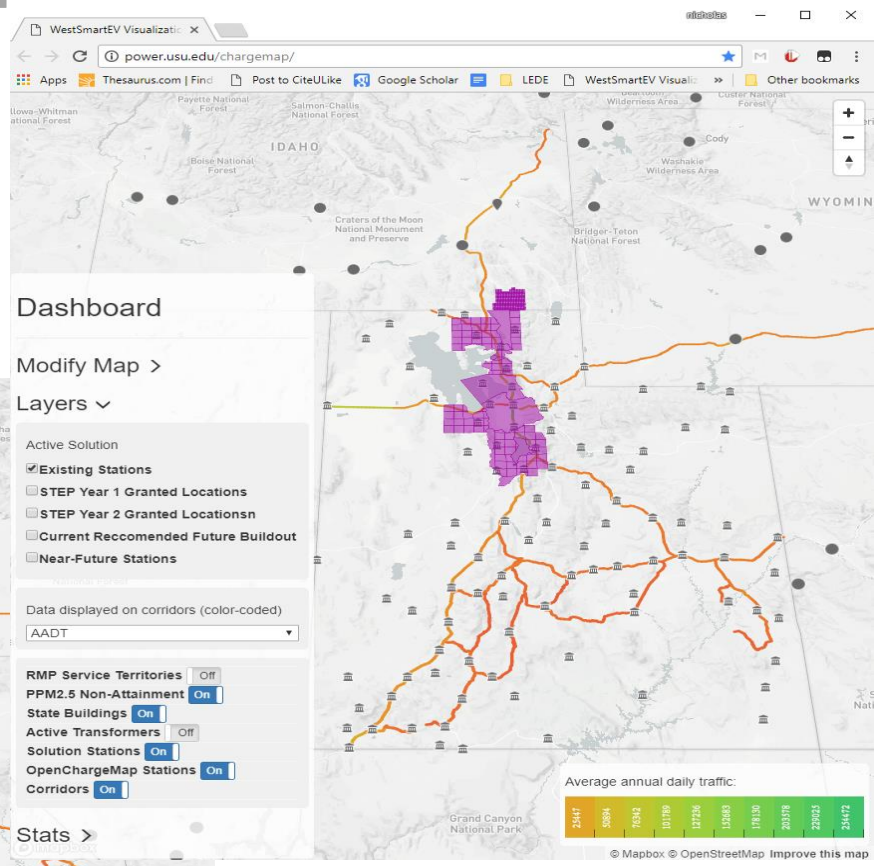
Utah Clean Cities Alternative Fuels

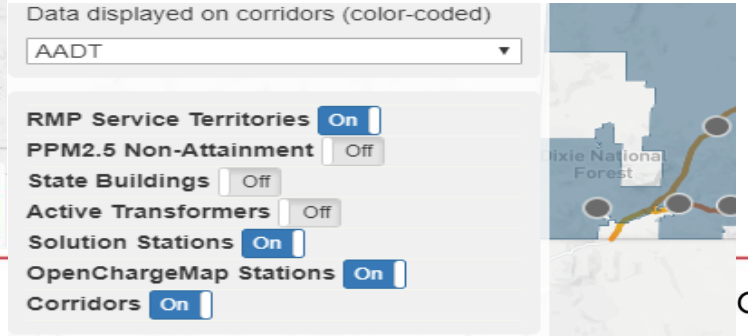
Decision support for charger buildout

- **Where:** Which specific locations along corridors?
- **How:** Grid connections, how many, how much power?
- **When:** Deployment priorities, timing?

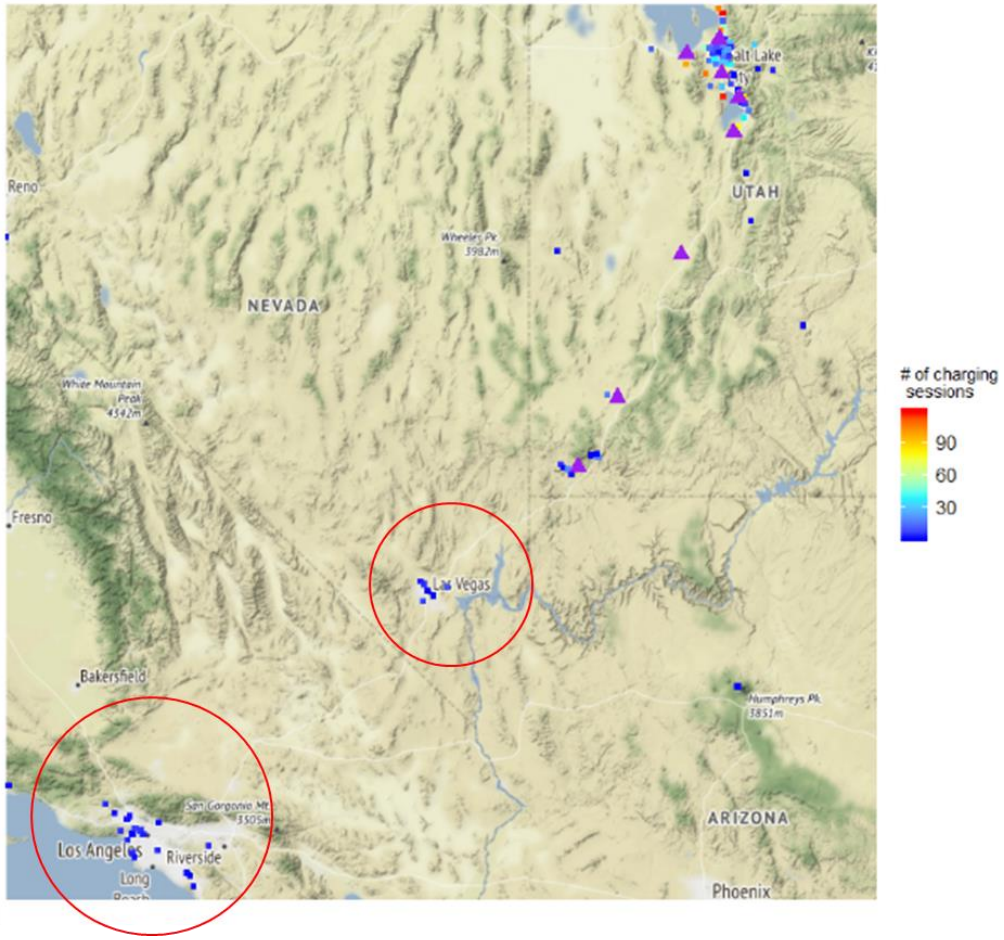








Utah I-15 Corridor Overview



Analysis:

Based on user zip codes, DCFC deployed along I-15 by WSEV have **successfully enabled EV travels from Los Angeles through the State of Utah**.

A high number of drivers from Las Vegas and Los Angeles are using the corridor's DCFC.

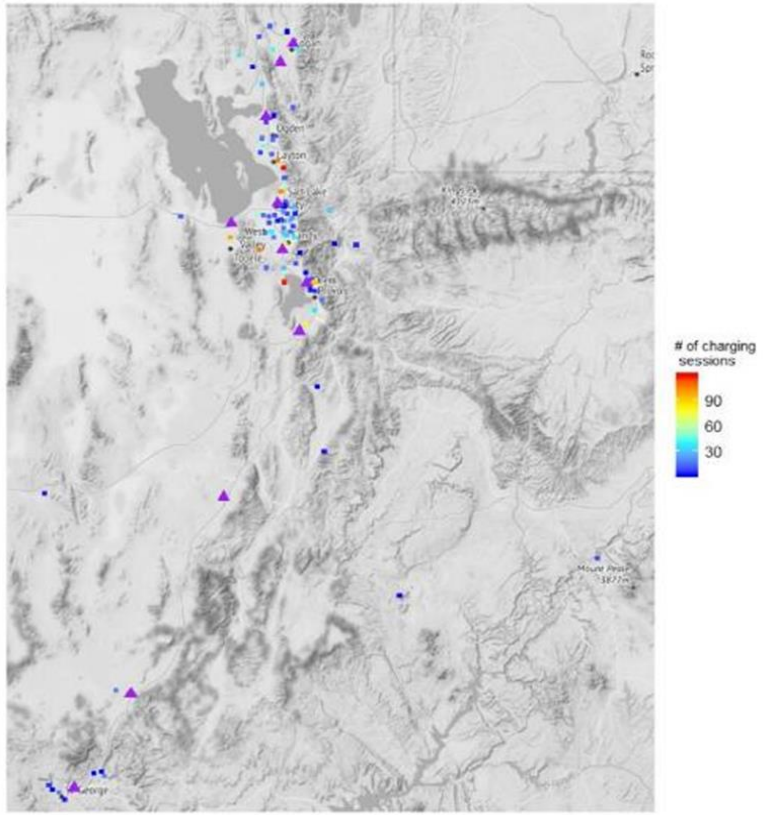
Use Comparison

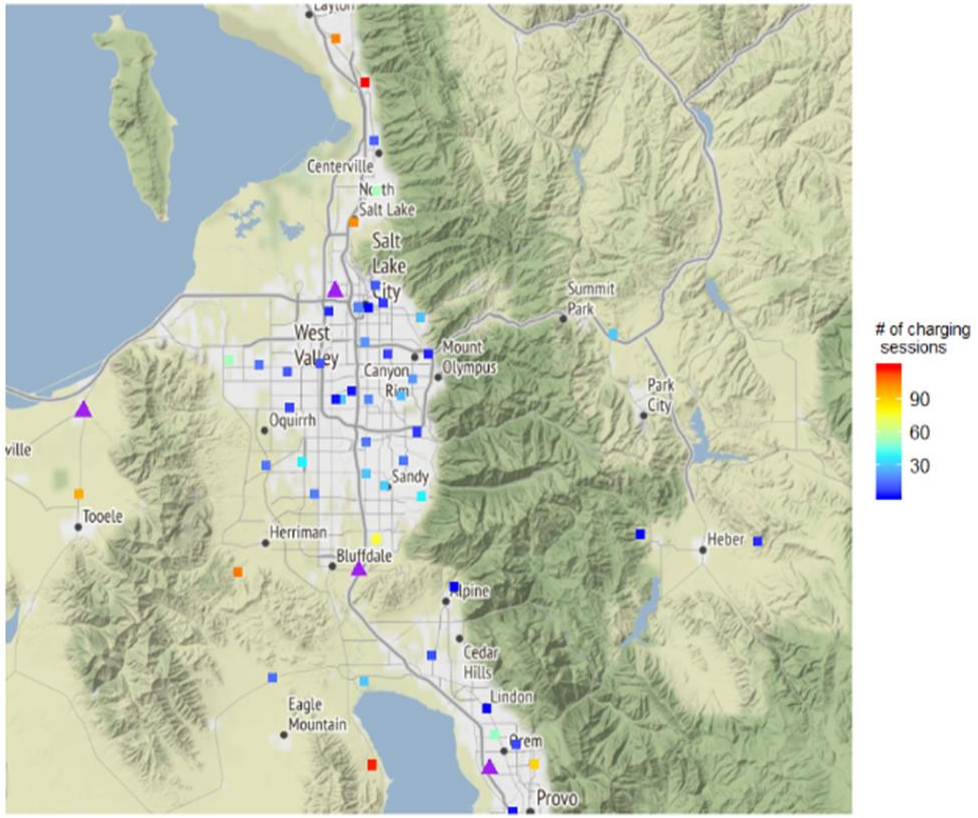
State-wide use

— DCFC location

— User ZIP code

Urban use





Most frequent use comes from EV drivers who live outside/on outskirts of population centers. DCFC use by EV drivers in the city tends to be less frequent

Smart Mobility: TNC and Carshare

Launched LYFT electric program

- Incentivize drivers to participate
- Train drivers to be EV ambassadors
- Provide access to multiple strategically located fast charging stations
- Collect energy and trip data

Launched electric car share program with Giv Group

- Car share for residents includes short and long range EVs
- Includes high-end, student, low income housing

TNC Mobility Data Collected

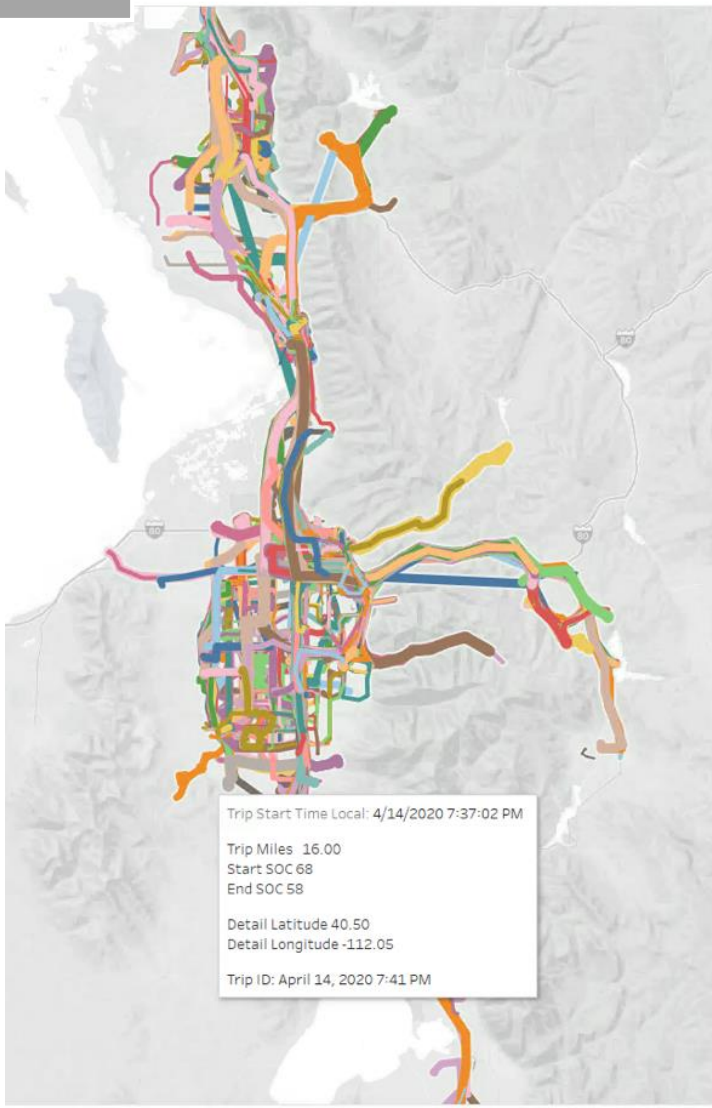
Miles: 100,785

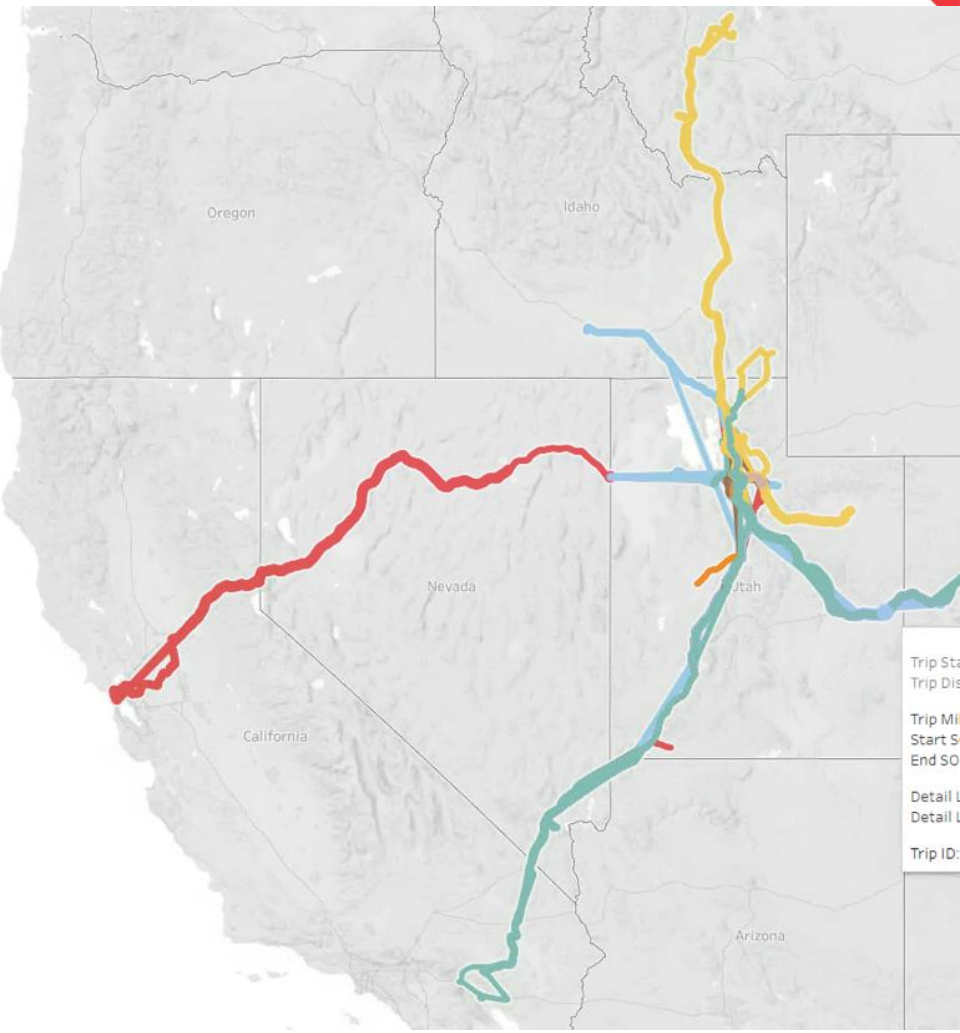
Leafs do not provide mileage data

Trips: 9,298

Energy added:
57,272 kWh

Need Public DC Fast Charging





Smart Mobility: Electric Buses

Park City electric buses

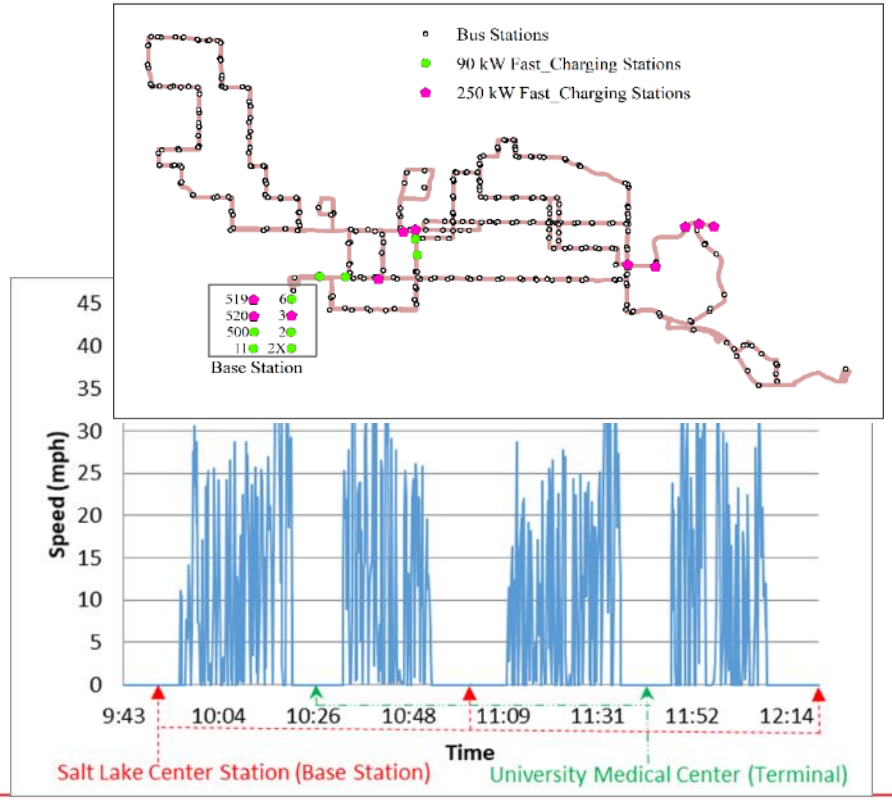
- Initial bus route 6 ebuses w/on route chargers-most traveled ebus route in the country
- Added 9 more buses throughout city-depot chargers

Photo: Park City Transit

- Co-located EVSE infrastructure with Summit County

Rollout planning: Salt Lake City

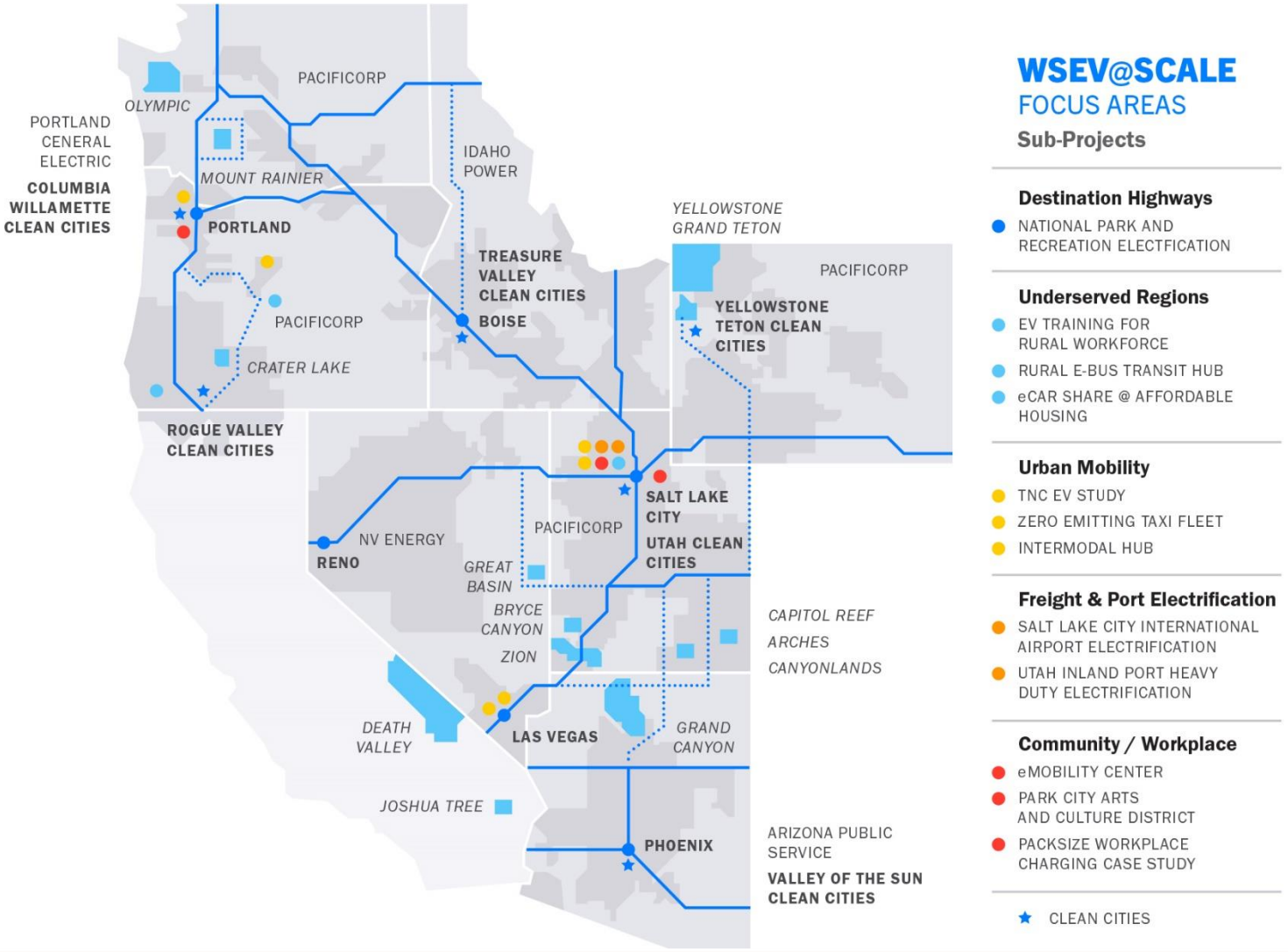
- Collected real world drive cycles
- Developed electric bus system planning tool



Findings

- Data driven approach is essential for infrastructure deployment
- Workplace charging good solution for daily commuters
- Public charging needed for high volume users and under-represented areas
- Potential to co-locate infrastructure with MD-HD like electric buses

Next Phase



Rocky Mountain Power to invest $50 Million in Infrastructure

$6.6 Million DOE Cost Share Award