

Senate Bill 125 - ASPIRE Electric Vehicle Infrastructure Overview



SB 125 Utah State University Update

July 2023



Agenda Item 9.a.



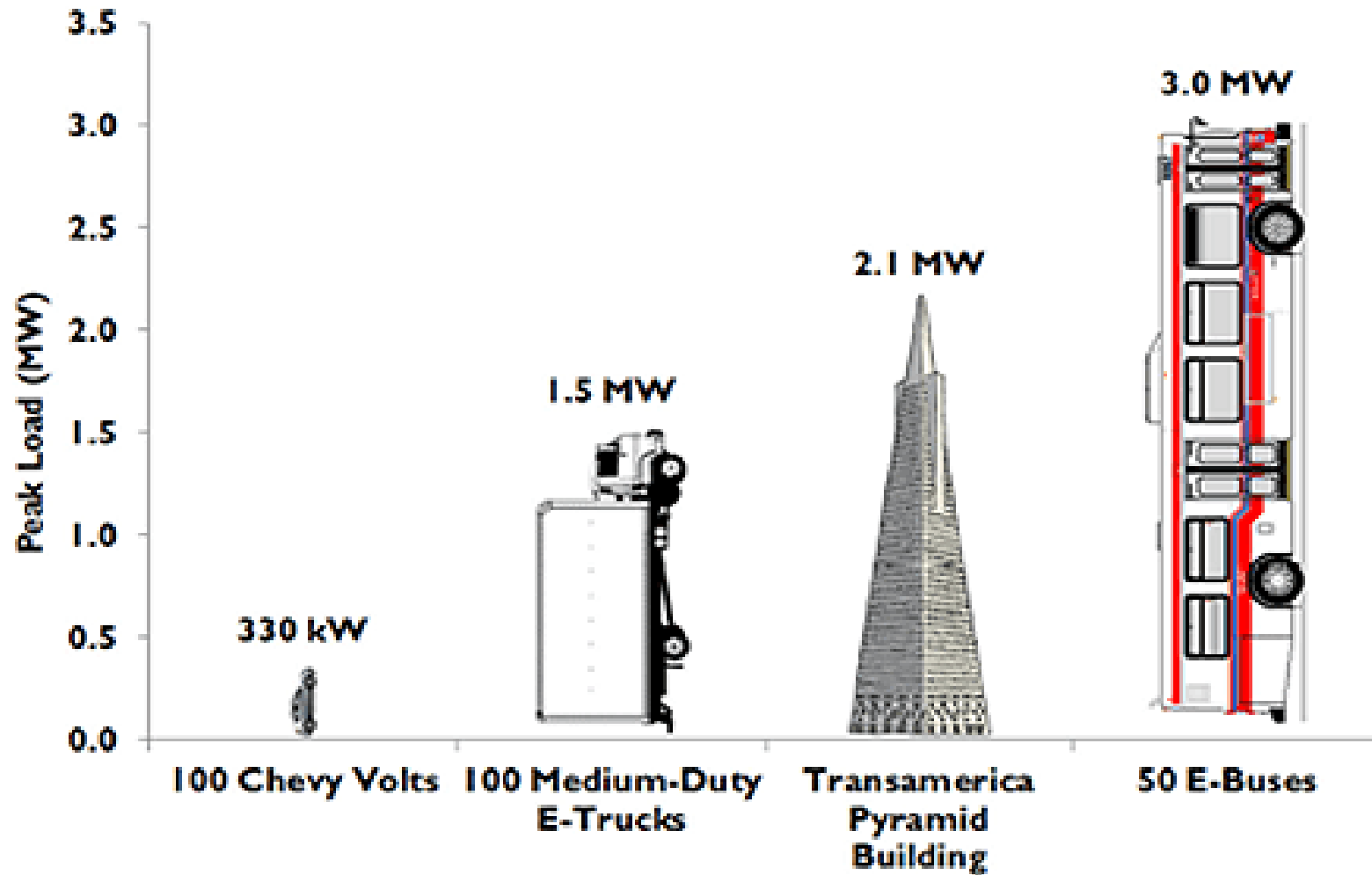
SB 125 Background

- Advancing Sustainability through Powered Infrastructure for Roadway Electrification (ASPIRE), a National Science Foundation Engineering Research Center housed at Utah State University, received \$2.1 million in ongoing funding through Senate Bill 125, Transportation Infrastructure Amendments.
- ASPIRE conducts vital research to pave the way for real-world deployment of electrified transportation systems.
- It partners with the University of Utah, Brigham Young University, and eight other universities across the world in its research, which is supported by NSF, industry partners, and research grants from the U.S. Departments of Energy and Transportation

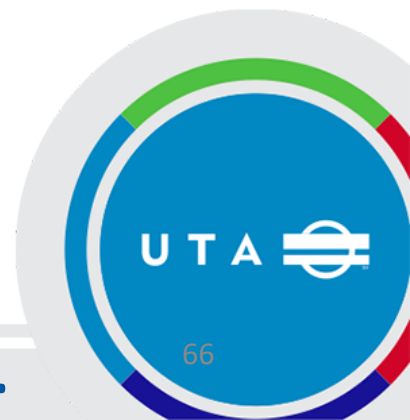


Why?: Grid Impact of Electric Buses

Figure 14: Peak loads for various electric vehicle fleets (without mitigating grid impacts)



Assumptions: the Chevy Volt charging rate is 3.3 kW, the medium-duty E-Truck charging rate is 15 kW and the E-Bus charging rate is 60 kW. The peak load for the Transamerica Pyramid building is from [26].



ALL CHARGED UP



Current UTA Electrification Projects

- Construction and Implementation
 - Buses
 - 2018 Low-No Grant: 3 UTA buses and 2 University of Utah buses in service
 - Park City Transit and High Valley Transit: UTA is supporting construction of charging infrastructure
 - Ogden Express: 11 battery buses and charging infrastructure
 - VW Grant: 20 battery buses in revenue system
 - Tooele on Demand: 10 small buses and charging
 - Light Rail
 - 105 light rail vehicles in service (50 miles, 50 traction power substations)
 - Light rail vehicle replacement
 - S-Line Extension
 - S-Line transition to renewable energy
 - Facility Projects
 - Depot District Bus Garage opened in May 2023
 - Transit Technical Education Center
 - Ongoing energy saving projects



Current UTA Electrification Projects

- Grant Applications
 - FHWA Charging and Fueling Infrastructure Grant (Community Program)
- Research and Studies
 - Bus Fleet Replacement Plan
 - FrontRunner Electrification
 - Commuter rail rolling stock electrification
 - RMP Partnership
 - ASPIRE Center Research



SB 125 Details

- Designates ASPIRE as the lead research center in developing a strategic action plan for the electrification of transportation infrastructure
- The plan will guide the transition to an electrified and intelligent transportation system
- Creates a Steering Committee and Industry Advisory Board
- Requires ASPIRE to prepare first annual report by August 2024 (annually thereafter)



Education Pass Agreement with the Salt Lake School District, Salt Lake Education Foundation and Salt Lake City



SALT LAKE SCHOOL DISTRICT

Education Pass and Funding Agreement Discussion

For the 2022-23 school year, UTA entered a partnership with the Salt Lake School District, Salt Lake Education Foundation, and the City of Salt Lake:

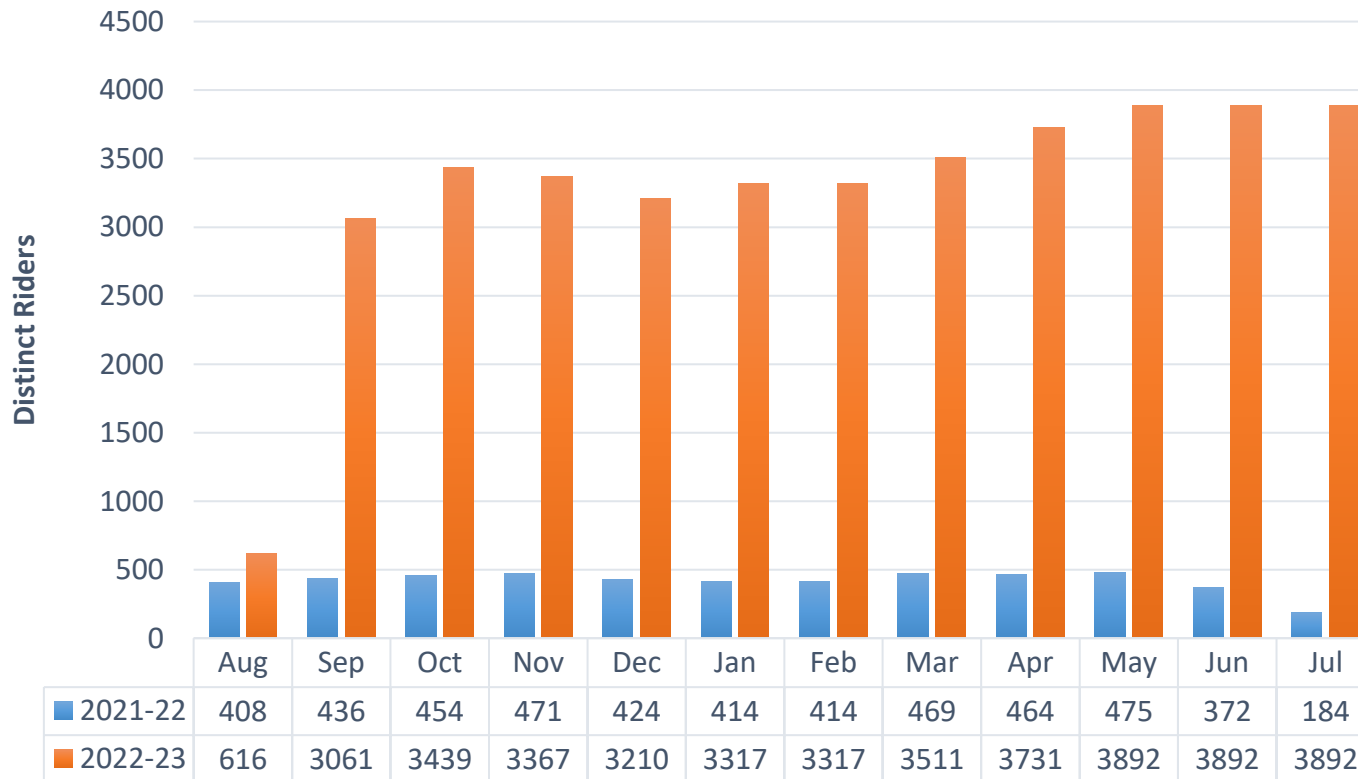
- 24,000 students, faculty, and staff
- Unlimited transit pass valid on local UTA Service
- Total contract value: \$379,000
 - Salt Lake Education Foundation and School District: \$279,000
 - Salt Lake City: \$100,000



SALT LAKE SCHOOL DISTRICT

Education Pass and Funding Agreement Discussion

DISTINCT RIDERS Y/Y



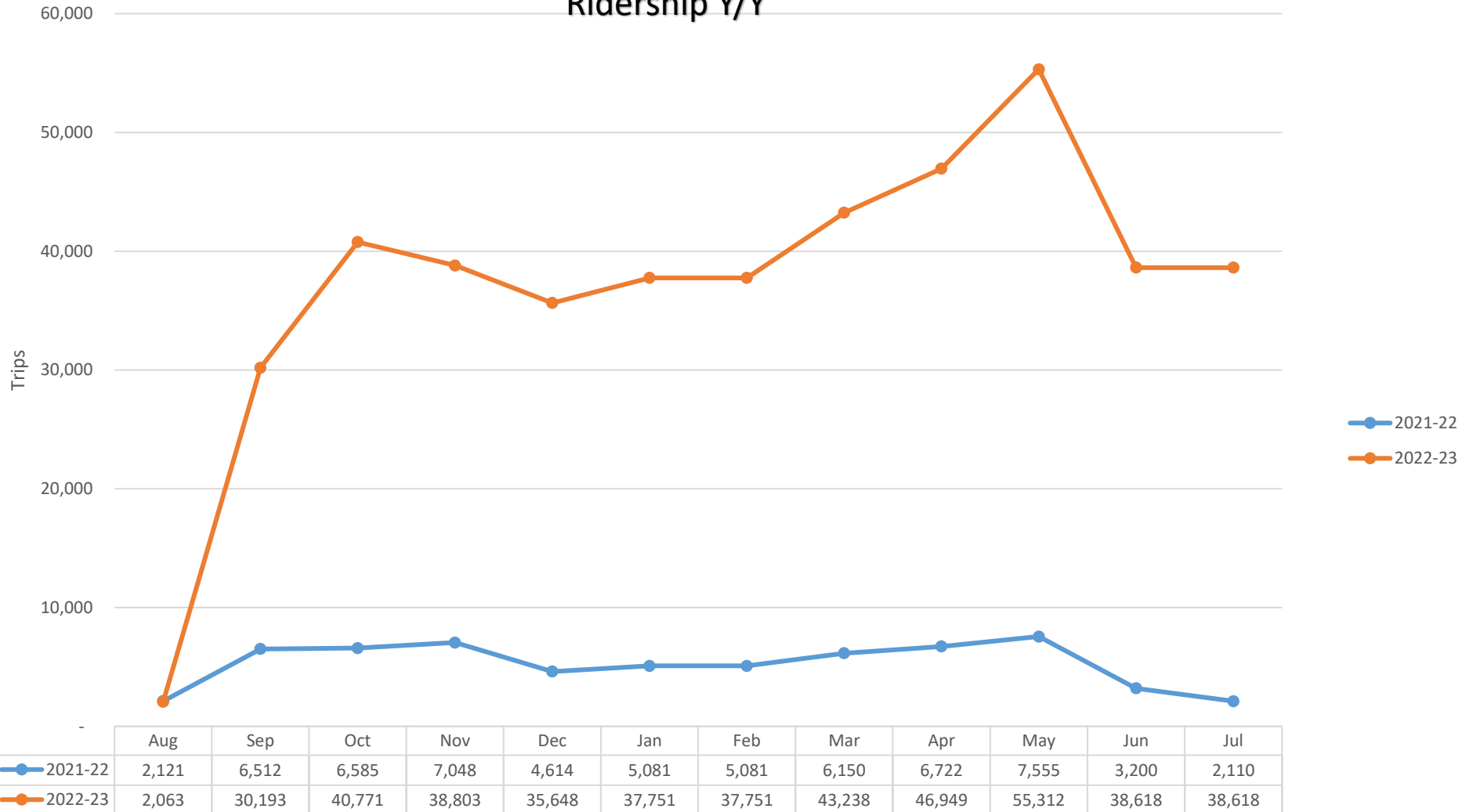
**Estimated for June and July 2023 Using Historical Data*



SALT LAKE SCHOOL DISTRICT

Education Pass and Funding Agreement Discussion

Ridership Y/Y



UTAH TRANSIT AUTHORITY



**Estimated for June and July 2023 Using Historical Data*

SALT LAKE SCHOOL DISTRICT

Education Pass and Funding Agreement Discussion

Providing access to opportunity:

- After School Activities
- Internships and Jobs
- Less Absenteeism



SALT LAKE SCHOOL DISTRICT

Education Pass and Funding Agreement Discussion

Expanded Access to Opportunity:

- Additional funding for (1) Guardian/Parent Transit Pass
 - Additional Authorized Users: TBD
- July 26, 2023, UTA Board of Trustees Meeting
- Total contract value: \$493,648
 - Salt Lake Education Foundation and School District: \$279,000
 - Mayor's General Fund: \$100,000
 - Council's Addition: \$114,648



Other Business

- a. Next Meeting: Wednesday, July 26, 2023, at 9:00 a.m.



Closed Session

- a. Strategy Session to discuss Collective Bargaining



Recommended Action

(by acclamation)

Motion to move to closed session to discuss Collective Bargaining



Closed Session



Open Session



Adjourn

