**ASPIRE Mission**

To improve health and quality of life for everyone by catalyzing sustainable and equitable electrification across the transportation industry.

**ASPIRE Vision**

Widespread electrification of all vehicle classes, improved air quality, and public infrastructure that provides an inexpensive, seamless charging experience.

**Impact:** Growth in domestic jobs and energy production; improved air quality & public health; reduce & stabilize transportation costs; inclusive pathways to diverse engineering workforce development to support cross-industry transformations.
10 Year Resource Plan

Center Foundation and Fundamental Convergent Research

- 37% EWD & DCI
- 44% RESEARCH THRUSTS
- 19% INNOVATION ECOSYSTEM

Leveraging across REDI Applied Research & Development

Industry Members
- AECOM
- ECPI University
- ELECTRON
- DUKE ENERGY
- EPRI
- FCA
- Ford
- D. H. Hyster-Yale
- Integrated Roadways
- John Deere
- KENWORTH
- A PACCAR COMPANY
- INTUCO
- INKOLA
- M. A. Scania
- Schneider Electric
- Stantec
- TOYOTA
- TransChill
- TransPower
- DriveOhio
- WAVE
- WiTricity
- Innovation Partners
- Argonne National Laboratory
- AEM
- CCAT
- C2O
- COMEXUS
- DriveOhio
- EPRI
- IML
- ITS America
- UNREL
- OAK RIDGE National Laboratory
- UDOT
- UTA
- V9DT

NSF Cost-Share
State Membership
Sponsored Research and P3 Pilots

A SPIRE
Engage all for an optimal, implementable solution
Perspectives for Improving Impact

Grid
- Flexible
- Predictable
- Managed

Vehicle
- Smaller Battery
- Lower C-rate
- Longer Life

User
- Reduced Cost
- Seamless Experience
- Equitable

Environment
- Localized Emissions
- Lifecycle Well-to-Wheel
ASPIRE ERC Woven REDI Program

Research

Engineering Workforce Development

Diversity and Culture of Inclusion

Innovation Ecosystem
Role of UTEP in ASPIRE

Lead Transportation
- Soheil Nazarian

Contribute to Data
- Bill Tseng

Contribute to Adaption
- Ivonne Santiago

Co-lead Power
- Paras Mandal

Co-lead EWD/D&I
- Ivonne Santiago

Co-lead Innovation
- Imad Abdallah
ASPIRE Transportation Team

Sub-Areas of Transportation
- Transportation Systems
- Transportation Infrastructure

Sub-Areas of Adoption
- User Acceptance / Society
- Public Policy / Economy
- Techno-economic Systems / Environment / Society

Sub-Areas of Power Team
- Power System Modeling, Control, and Grid Integration
- Power Electronics, Charging Hardware/Control/Thermal
- Battery/Energy Storage Modeling and Control
ASPIRE Team

Bill Tseng
Sub-Areas of Data
- Data Analytics, Data Fusion, Machine Learning
- Optimization Theory, Operations Research, Co-simulation
- Communication Networks, IoT, Real-time / Embedded Systems, CPS Security

Ivonne Santiago
Sub-Areas of EWD
- Pre-College
- Undergraduate & Graduate
- Technical & Professional
- Community Engagement

Imad Abdallah
Sub-Areas of Innovation
- Testbeds and P3 Pilots
- Global Programs
- IIB Executive Advisory Board Integrated Innovation Sub-Committee
It takes all of us!!
Thank You

Join Us.

Be a part of the coming transformation in the transportation and electric utility industries.