



Expression of Interest- Trenton Moves

Many neighborhoods of Trenton fall in Areas of Persistent Poverty, and according to the 2019 American Community Survey, about 70% of households in Trenton have one or zero vehicles. Trentonians spend a large portion of their disposable income on daily transportation and many residents rely on their family and friends for mobility. People in such disadvantaged communities who do not own their own vehicles have very few mobility options to meet their basic travel needs and face chronic problems that reduce their quality of life and productivity. Rural transit service is often expensive, infrequent, and hard to access because of long travel distances and low development densities. As job locations become increasingly dispersed, existing transit services are no longer adequate.

LuftCar, LLC is developing a hydrogen powered, **modular autonomous air and road mobility** vertical takeoff and landing vehicle that will be a low capacity (4-8 passenger), low-noise, safe, and affordable vehicle with zero-emissions.

LuftCar will provide uninterrupted air and road travel through detachable air and road modules. By building a cost-effective, seamless multimodal system such as LuftCar, that assumes the last mile of every trip, both the general traveling public as well as the older adults, persons with disabilities, and the poor will be provided with affordable transportation choices and opportunities for economic success. With an estimated \$0.50 per car seat mile cost when fully commercialized, LuftCar provides affordable and faster long distance commuting from rural and disadvantaged communities regions to urban sectors, healthcare and employment hubs.

Transportation is the end-use sector responsible for the most energy consumption (34.2%) in New Jersey, according to the most recent estimate from the U.S. Energy Information Administration (EIA). With a green hydrogen fueled LuftCar, the only tailpipe emission is water vapor, so there is no worsening of air quality.

LuftCar will have strategically placed vertiports with kiosks that can be aligned with locations in the NJDOT's Operational Design Domain and Service Concept. LuftCar passengers can use a smart phone app for ride hailing or schedule rides from nearest kiosks. In a shared LuftCar, LuftCab can pick up multiple travelers, drive them to the nearest vertiport/LuftPad dock into the air module, fly to another LuftPad at the destination, undock and drive to the final destination. LuftCab will be a door to door service that will save transit times. The flexibility and versatility of LuftCar's design (handicapped accessible with wheelchair accommodation, designated child safety seats) makes it an excellent candidate to serve Trenton's needs for autonomous travel within and around the city.

Every LuftCar will have following safety equipment-

- camera monitoring from from central operations center
- manual override option for emergency landing/stopping and evacuation
- GPS feed into police, fire and 911 dispatch center
- smoke/fire detectors

Seamless travel, sustainability and social equity are critical in LuftCar's vision.



LuftCar in Flight Mode



LuftCar in take-off mode



LuftCar – air and road modules in disengagement