Innovations in Electric Transportation

It's well known that our greenhouse gas emissions from transportation have been growing in recent decades as the amount of passenger vehicles per family increases. In response, electric vehicles and transportation in general have been exploding in popularity. Not only do they provide benefits for the environment, but they also cut costs for the consumer who can charge their car at home. Innovations are still needed to make these vehicles convenient, practical, and reasonably priced options, and the following are either doing so or providing alternative electrical means of transportation.

Electrical Charging Stations

One of the greatest hindrances to widespread adoption of electric vehicles is the lack of charging station infrastructure across the country. While charging at home for the daily commute and a few errands is well within reach, cross-state travel is a dicey proposition currently. One of the companies looking to change this, ChargePoint, is using cloud-based software to monitor 23,000 charging locations. (Climate Action) In addition, they recently brokered an agreement with Envision Solar to integrate their charging stations with solar power infrastructure for carbon zero charging stations. (Climate Action) These moves position them to accelerate the expansion of mass electric vehicle charging station infrastructure.

Ultra-Fast Charging

Electric passenger vehicles are surging in popularity, and it is estimated that in 20 years 500 million electric vehicles will be on the road. (Driivz) One innovation that could propel many to adopt this technology is ultra-fast charging. As discussed previously, the lack of charging infrastructure is a huge detriment to these sustainable vehicles. An additional problem is the time it takes to charge. Many companies are racing to deliver ultra-fast charging capabilities that will allow 20 miles of range to be charged in a single minute. (Driivz) With this development, Australia will be looking to implement a country-wide network of improved charging stations.

Aircraft

Eviation, a company dedicated to engineering electric aviation, has produced the first electric passenger aircraft. "Named Alice, the aircraft is a revolutionary innovation to regional travel, providing sustainable, affordable and quiet short-haul journeys for up to 9 passengers." (Climate Action) Currently, there has been a low rate of adoption for the aircraft, with only two airlines purchasing the Alice to date. There are still many improvements necessary to make electric aircraft cost-effective and large enough for commercial use, but this is a big step towards sustainable travel all the same.

Work Cited

"10 Electrification of Transport Innovations." Climate Action, https://www.climateaction.org/

"5 EV Technology Innovations for Easier and Faster EV Charging Future." Driivz, 24 Nov. 2021, https://driivz.com/blog/ev-charging-technology-innovations/.

Produced by the Utility Arborist Association Environmental Stewardship Committee and Davey Resource Group:

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