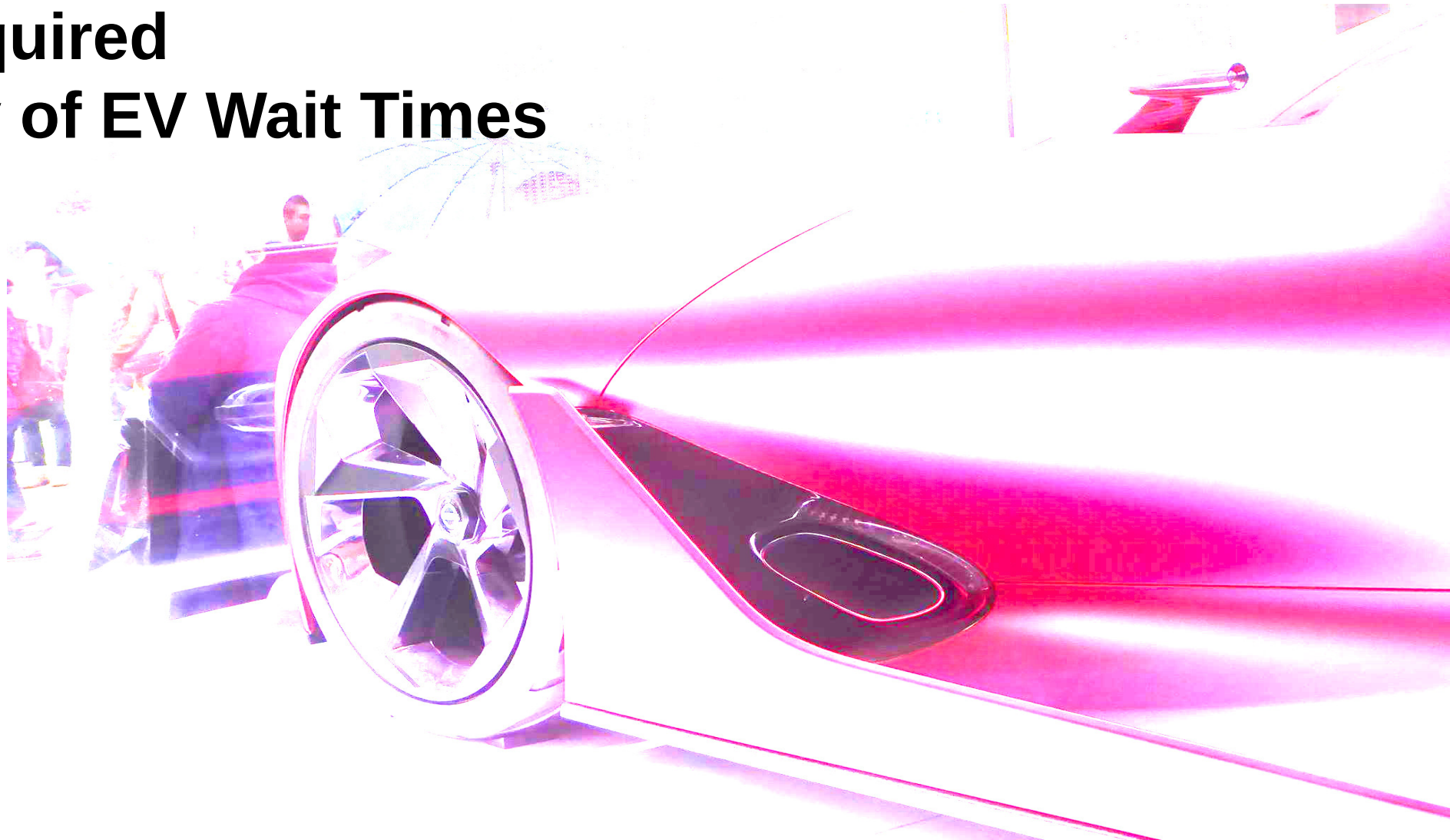
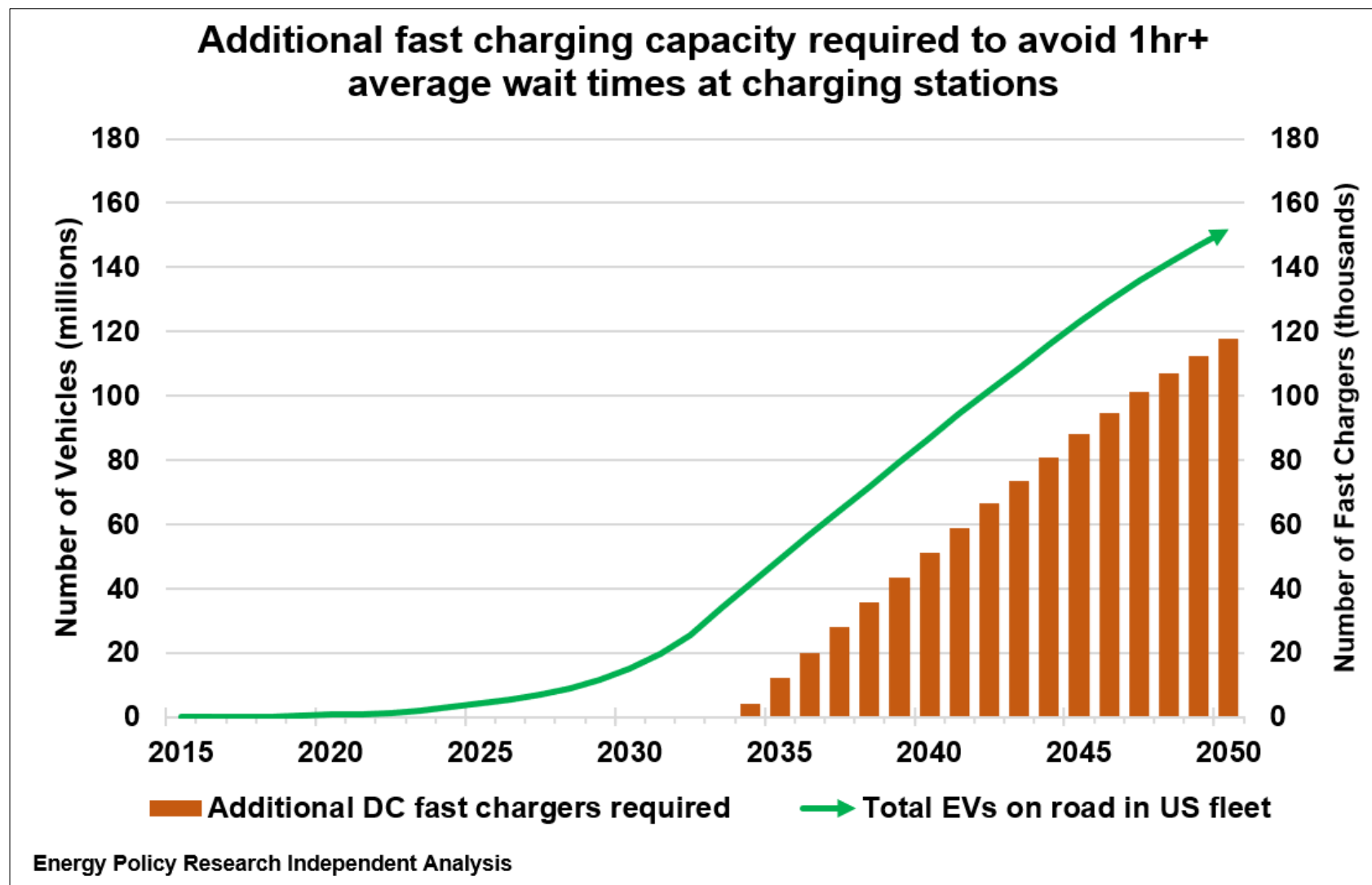


Chart of the Week #2024-29 - Errata:

- **Additional DC Fast Charging Capacity Required**
- **Acceptability of EV Wait Times**



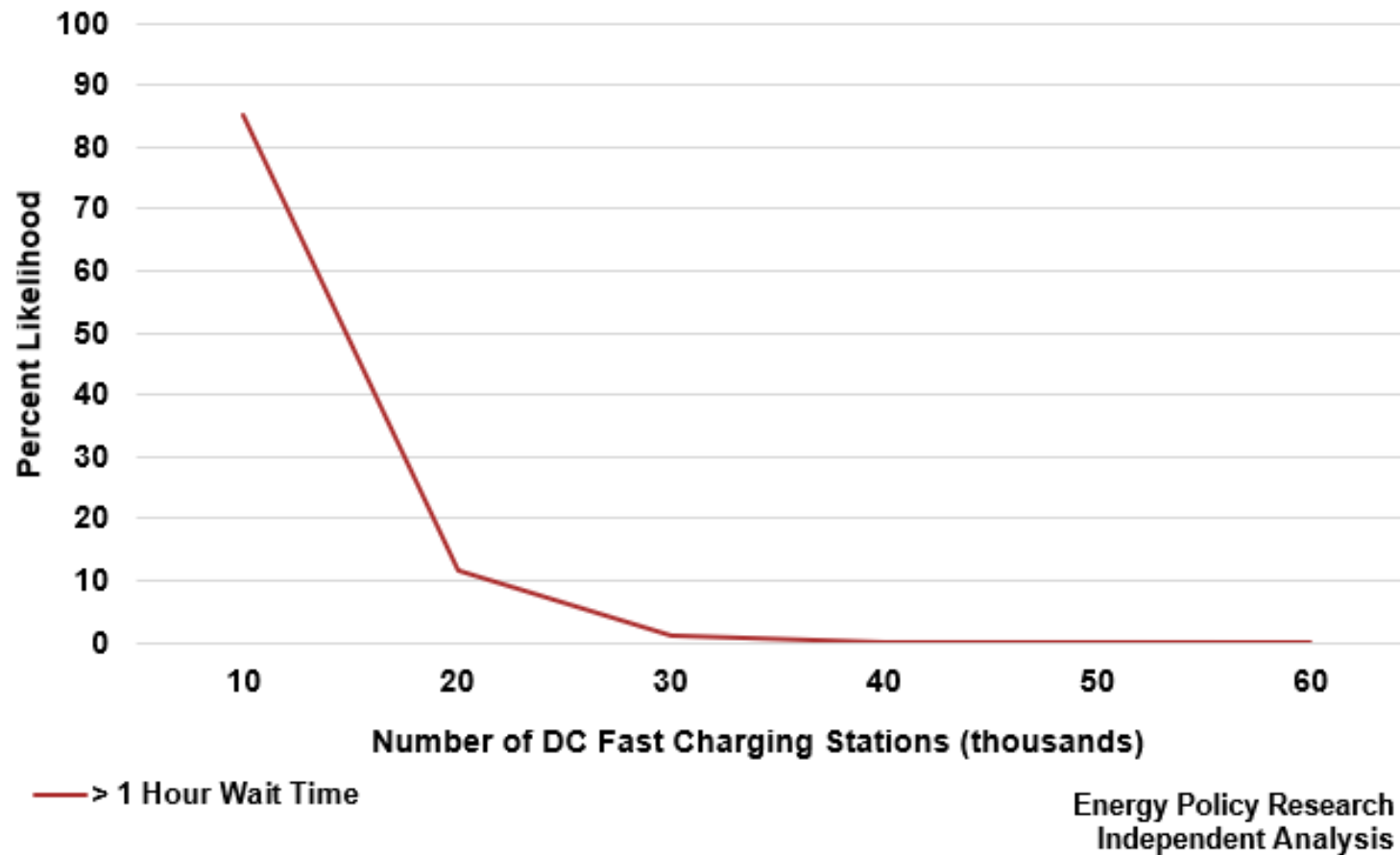
Matthew Sawoski
July 25, 2024
Washington, DC



Additional DC Fast Charging Capacity Required to Avoid 1+ Hour Wait Times

- **Chart 2024-26, published July 3, 2024, has been updated. While the total number of required DC fast chargers is now projected to be 118,000 in 2050, down from 169,000 that was initially projected, the total expected cost has risen from \$3.4 billion to \$5.1 billion. The increase in cost is due to the use of \$50,000 per charging port, a more comprehensive cost assessment than the initial \$20,000.**
- **In sum, though the updated number of required charging ports decreases by 30%, the total cost of the installation increases by 50%.**

Probability of Unacceptable Wait Times at DC Fast Chargers in 2050 at CAFE mandated EV Adoption Rates



Acceptability of EV Wait Times at DC Fast Charging Locations

- Using the benchmark scenario of 30,000 total charging stations the probability of wait times in excess of 1 hour was found to be 0.37%. While this number may seem low, under EPRINC's model with an estimated 5.5 million Americans in EVs needing fast charging on any given day in 2050, it would equate to 20,000 Americans with wait times over an hour every day.
- This number only dips below statistically significant figures when 40,000 to 50,000 fast charging stations are built in total. This number would require \$8.0 billion of investment, rather than the \$5.1 when only considering average wait times.
- This analysis is based on the assumption that DC fast charging stations are built in accordance with the current average of five charging ports per charging station.
- For more information, see EPRINC's release today "The Energy Economics of EVs and ICEVs: A Comprehensive Analysis of Potential Wait Times at Charging Stations."

- These charts and analysis are found in EPRINC report “The Energy Economics of EVs And ICEVs: A Comprehensive Analysis of Potential Wait Times at Charging Stations” available at: <https://eprinc.org/fyi-in-brief-the-energy-economics-of-evs-and-icevs/>
- This slide deck is available at: <https://eprinc.org/chart-of-the-week/>
- For more information on these charts, please contact Matthew Sawoski (matthews@eprinc.org).