Barbara Sullivan
Director – Ground Service Equipment & Facility Maintenance

October 14, 2020

VIA E-MAIL (NJairrulesmobile@dep.nj.gov)

Re: NJDEP Cargo Handling and Airport Ground Support Equipment NJ PACT Rule

To Whom it May Concern:

United Airlines, Inc. ("United") appreciates the opportunity to submit comments to the New Jersey Department of Environmental Protection ("NJDEP") on its planned NJ Protecting Against Climate Threats ("PACT") rule to reduce CO_2 emissions from cargo handling and airport ground support equipment ("GSE").

United is committed to operating sustainably and responsibly and strives to minimize the environmental impacts associated with its operations. United was the first U.S.-based airline to publicly commit to reduce its individual greenhouse gas emissions 50% by 2050, compared to 2005 levels. United is the only domestic airline to use sustainable aviation fuels in daily operations on a continuous basis and has made significant investments in sustainable aviation fuel development. In 2019, United pledged $40 million to further decarbonize commercial air travel.

United's commitment to and leadership on environmental sustainability initiatives extends to its activities on the ground. Over 4,000 units of United's GSE fleet systemwide are electric or use alternative fuels, and United is committed to adopting electric GSE at Newark Liberty International Airport ("EWR"). United is fully supportive of the overall goals of the NJ PACT initiative to reduce CO_2 emissions from GSE.

It is noteworthy, however, that the coronavirus pandemic has posed unprecedented challenges for the aviation sector. United's second quarter 2020 financial results revealed the most difficult financial quarter in the company's 94-year history, with an 88% decrease in capacity year over year. Third quarter 2020 system capacity is estimated to be down 65% compared to 2019. A recovery to pre-pandemic air traffic levels is currently not expected for a number of years, but United remains committed to reducing CO_2 emissions from GSE as the industry recovers.

In the near-term, an environmental consequence of such a severe economic downturn caused by the coronavirus has been the reduction in emissions at EWR, with United's greenhouse gas footprint at EWR estimated to be reduced by 63% year over year in August 2020 with a corresponding EWR capacity reduction of 66%. While United is still fully supportive of GSE electrification over the next 10 years, it urges NJDEP to consider the difficult financial environment the aviation sector is currently operating in, as well as the near-term pollutant reductions already realized as a consequence of this downturn, as it develops implementation dates for the regulations.

United appreciates NJDEP's request for feedback on the question of commercial availability. United recommends that NJDEP view commercial GSE availability in concert with operational reliability when developing this rulemaking. While there have been major advancements in electric/hybrid availability for GSE, all commercially available alternatives need to be rigorously tested in an airport environment. United has had electric baggage tractors and belt loaders in our fleet in some capacity across the system for over a decade. Electric technology in GSE has been limited when it comes to engine sizes and these were successful on baggage tractors and belt loaders as they have smaller engines more akin to passenger vehicles. Technology continues to improve and has unlocked several additional types of GSE we consider to be commercially available and operationally reliable. We fully support the electrification of cargo loaders and aerial/scissor lifts along with some varieties of pushback tractors, towbar-less tractors, and ground power units.

However, other GSE such as large ground power units, catering trucks, mobile stair trucks, refueling trucks, deicing trucks, air conditioning units, and air start units all have engines/powertrains (largely due to engine size) that do not have commercially available solutions at this time.

We anticipate the GSE landscape of commercially available equipment will continue to expand in the future; however, they must be tested in an airport setting prior to mandating use of these units. For example, in our pushback and towbarless tractor fleets, we have found newly commercially available hybrid/electric solutions have fallen short of their fossil fuel counterparts in terms of range. Advertised range was often under optimal conditions and the realities of the surface areas (uneven or sloped areas) and ambient environment (extreme cold reduced range) at an airport resulted in equipment needing to be recharged midway through a shift, taking a piece of equipment entirely out of use. United requests that NJDEP consider these operational constraints and account for the fact that new eGSE models should be successfully tested in the airport environment under all conditions before they can be determined to be commercially available.

Along with determining operational reliability, NJDEP should also consider the cost of equipment and manufacturing constraints. Items such as an electric 90kVA ground power unit have only been available for a couple of years, so are relatively untested in terms of performance, and are currently more than double the cost of their fossil fuel counterparts. Some GSE manufacturers that produce eGSE have a poor track record with their non-eGSE fleet due to quality and maintenance issues. As such, NJDEP should consider whether there is a wide variety of reputable, reliable manufacturers of eGSE available.

With respect to infrastructure, it is also worth noting that not all eGSE uses the same types of chargers. While the majority of eGSE uses a Posi-Charge or Minut charger system, electric passenger vehicles and electric ground power units both use wholly different charging systems requiring unique infrastructure. In addition, the existing electrical infrastructure at EWR is aged and not able to adequately support electrical capacity needed to establish a complete conversion of significant portions of GSE fleets. United requests that NJDEP continue to consult with

industry and airport stakeholders regarding infrastructure constraints and incorporate these considerations in its rulemaking decisions.

Thank you for the opportunity to provide comments. We look forward to continuing to work with the NJDEP on this important initiative. If you have any questions or need any further information, please do not hesitate to contact me at barbara.sullivan@united.com.

Sincerely,

Barbara Sullivan