Table 1. Suggested Use Cases for the High-Resolution 3-Year WTK-LED Datasets, the Hourly 4-km WTK-LED Climate Dataset, and the NOW-23 Offshore Dataset

Dataset	WTK-LED CONUS and WTK-LED Alaska	WTK-LED Climate	NOW-23
Description	Simulations from 2018 to 2020 at 5 min and 2 km resolution	Simulations covering North America from 2001 to 2020 at hourly and 4 km resolution	Simulations at 5 min and 2 km resolution for offshore areas and Hawaii for 20+ years
Use case: wind resource assessments	Preliminary land-based wind resource assessments including interannual, seasonal, diurnal variability assessments; a priori validation of data strongly recommended	Averaged wind resource estimates (e.g., interannual variability, long-term averaged seasonal and diurnal variabilities); a priori validation of data strongly recommended; Applications needing high-resolution data covering North America	Preliminary offshore wind resource assessments, including interannual, seasonal, diurnal variability assessments; a priori validation of data strongly recommended
Use case: grid integration	Land-based grid integration studies (a priori validation strongly recommended)	Avoid time-specific grid integration analyses	Offshore grid integration studies (a priori validation strongly recommended)
Use case: environmental modeling and airborne wind energy	Environmental modeling (the data include vertical wind speed and turbulence kinetic energy) or airborne wind energy assessments (the data are available up to 1000 m above ground level)	Vertical wind speed and turbulence kinetic energy is not available.	Offshore studies requiring data up to 500 m; vertical wind speed and turbulence kinetic energy not included
Use case: statistical weather analyses	Shorter-term (up to 3-year) statistical analyses	Risk analysis about wind extremes due to natural hazards (hurricanes, wildfire)	Risk analysis about wind extremes due to natural hazards (hurricanes)