The Vlasov-Poisson system with massless electrons (VPME) is widely used in plasma physics to model the evolution of ions in a plasma. It differs from the classical Vlasov-Poisson system in that the Poisson coupling has an exponential nonlinearity that creates several mathematical difficulties. In this talk, we will discuss the well-posedness of VPME, the stability of solutions, and its behaviour under singular limits. Then, we will introduce a new class of Wasserstein-type distances specifically designed to tackle stability questions for kinetic equations. As we shall see, these distances allow us to improve classical stability estimates by Loeper and Dobrushin and to obtain, as a consequence, improved rates in quasi-neutral limits.