For a system defined with many possible configurations through a model Hamiltonian, calculated from model potentials, or through first principles methods it may be desirable to calculate the density of energy states. This is a difficult problem and there are methods to achieve this just as the Wang and Landau algorithm. In this paper a method is proposed that combines the use of random sets along with the importance sampling method of the Wang and Landua algorithm. This algorithm is referred to as the "Blender" algorithm. The name "Blender" comes in part because how it blends the ideas of a random set and the Wang and Landau method, and also due to the nature of the algorithm iteratively blending histograms to produced a converged density of states.