Owing to the massive deployment of renewable power production units over the last couple of decades, the use of stochastic optimization methods to solve the unit commitment problem has gained increasing attention. Solving stochastic unit commitment problems in large-scale power systems requires high computational power, as stochastic models are dramatically more complex than their deterministic counterparts. This paper provides new insight into the potential of Progressive Hedging to decrease the solution time of the stochastic unit commitment problem with a relatively small trade-off in terms of the suboptimality of the solution. Computational studies show that the run-time is at most half of what is needed to solve the original extensive formulation of the problem, when more than ten wind power scenarios are utilized. These studies demonstrate great potential for solving real-world stochastic unit commitment problems using the Progressive Hedging algorithm.