The basic contracts traded on energy exchanges are swaps involving the delivery of electricity for fixed-rate payments over a certain period of time. The main objective of this article is to solve the quadratic hedging problem for European options on these swaps, known as electricity swaptions. We consider a general class of Hilbert space valued exponential jump-diffusion models. Since the forward curve is an infinite-dimensional object, but only a finite set of traded contracts is available for hedging, the market is inherently incomplete. We derive the optimization problem for the quadratic hedging problem and state a representation of its solution, which is the starting point for numerical algorithms.