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We consider the problem of existence and uniqueness of variational solutions to stochastic differential equations driven by compensated Poisson random measures. The problem is set up in a Gelfand triplet $V \hookrightarrow H \hookrightarrow V^*$ of real separable Hilbert spaces. For example, when the linear term is the second derivative, it can be viewed as an operator from a Sobolev space $W_0^{1,2}(\mathbb{R})$ to its dual $W_0^{-1,2}(\mathbb{R})$. Under usual assumptions on the coefficients a weak solution is produced as a weak limit of finite dimensional approximations. Asymptotic properties of the solution will also be discussed. (Received January 06, 2015)