In Coulomb gauge, we use first order formalism

$$\exp\left(-\int d^4x\ F_{0i}^2/2\right) = \int d^3\pi \exp\left(\int d^4x\ [i\pi_i F_{0i} - \pi_i^2/2]\right)$$

so the energy divergences cancel manifestly. Here $F_{0i} = \partial_0 A_i - D_i A_0$, and the Coulomb gauge condition $\partial_i A_i = 0$ holds identically. The canonical color-electric field

$$\pi_i = \tau_i - \partial_i \lambda$$

decomposes into its transverse τ_i, with $\partial_i \tau_i = 0$, and longitudinal parts λ.