

We show that a universe with a dynamical cosmological constant approaching pure de Sitter at timelike infinity, enjoys an infinite dimensional symmetry group at its horizon. This group is larger than the usual $SO(4, 1)$ of pure de Sitter. The charges associated with the asymptotic symmetry generators are non-integrable, and we demonstrate that they promote an extended version of the first law of thermodynamics. This contains four pairs of conjugate variables. The pair (Θ, Λ) corresponds to the change in the cosmological constant and its conjugate volume Θ . The contribution of the surface tension of the horizon and its conjugate parameter surface area make a pair (σ, A) . The usual conjugate variables (T, S) , (Ω, J) and a term $\delta v \delta S$ corresponding to entropy production, are included. In addition, this extended first law describes the non-conservative behaviour of the asymptotic charges in non-equilibrium.