Equivalences induced by infinitely generated silting modules

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Abstract: In the derived category $\mathbf{D}(R)$ of a ring R we consider silting complexes concentrated in -1 and 0 and we study equivalences induced by them. More precisely, if $\mathbb{P}$ is a good silting complex and $\mathbb{E}$ is the endomorphism ring of $\mathbb{P}$ then the restrictions $\operatorname{Hom}_{\mathbf{D}(R)}(\mathbb{P}, -)_{|\mathcal{T}} : \mathcal{T} \to \operatorname{Mod} \mathbb{E}$ and $\operatorname{Hom}_{\mathbf{D}(R)}(\mathbb{P}, -[1]) : \mathcal{F} \to \operatorname{Mod} \mathbb{E}$ are fully faithful, where $(\mathcal{T}, \mathcal{F})$ is the torsion theory in $\operatorname{Mod} R$ generated by $\mathrm{H}^0(\mathbb{P})$.