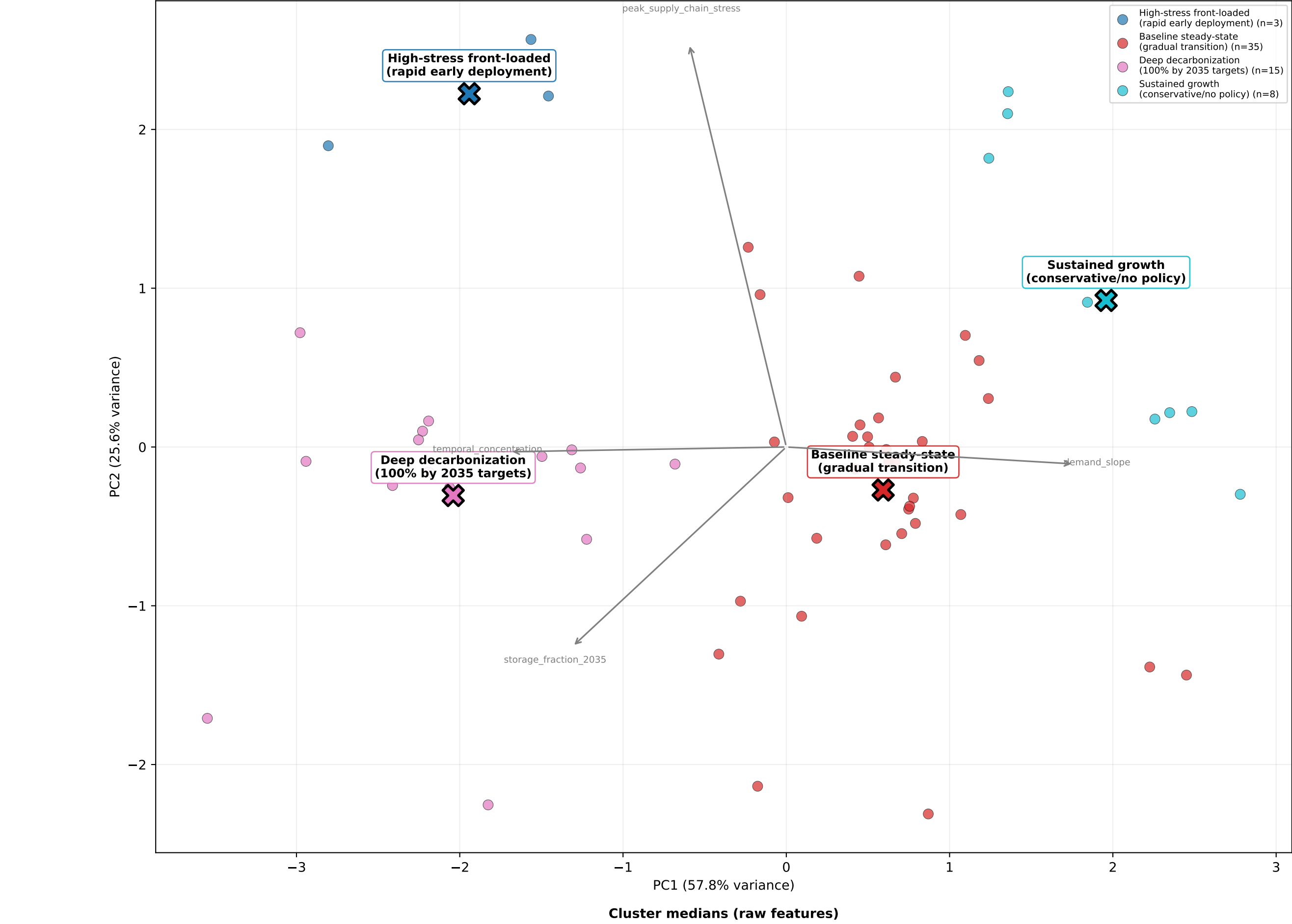


PCA biplot — scenarios_vif50_k4



	demand_slope	temporal_concentration	storage_fraction_2035	peak_supply_chain_stress
High-stress front-loaded (rapid early deployment)	-1.1M	4.27	0.06	0.30
Baseline steady-state (gradual transition)	-81.7k	1.53	0.06	0.24
Deep decarbonization (100% by 2035 targets)	-1.2M	4.24	0.08	0.25
Sustained growth (conservative/no policy)	469.0k	1.17	0.04	0.24