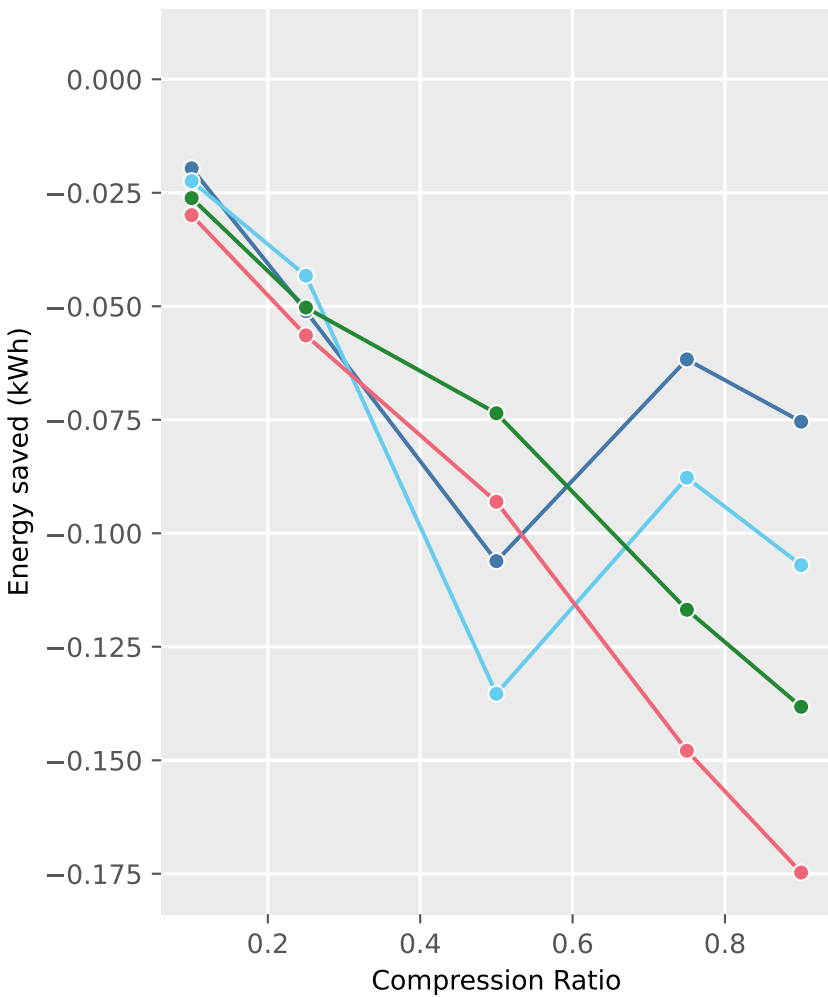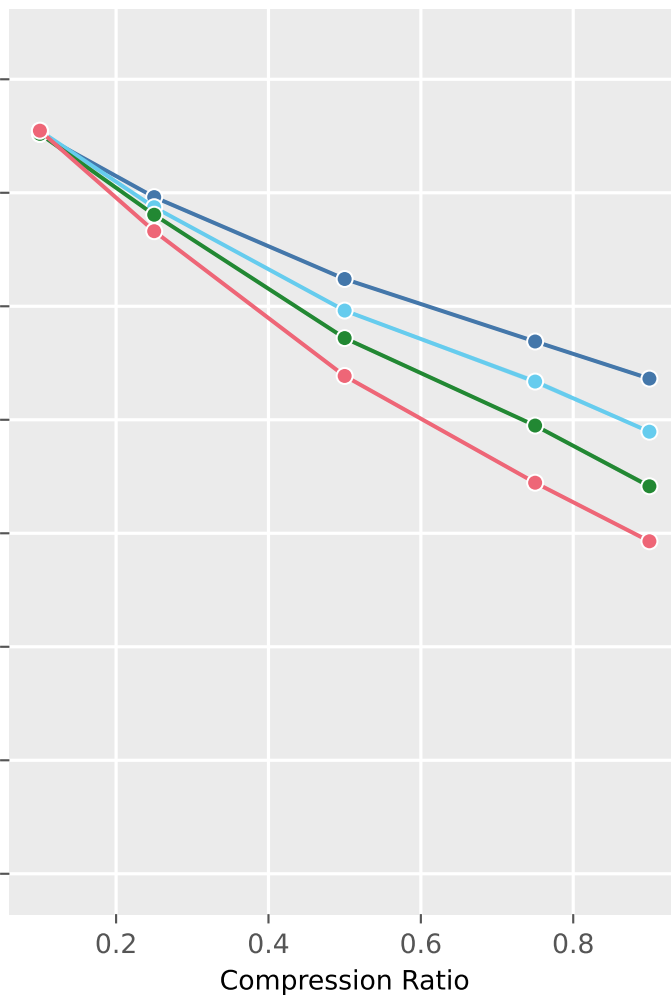Energy Consumption Across Compression Ratios by Input Channels and Decomposition Methods