I've recently become aware of some proposals to charge rent for storage. If the USD hardware cost of 1 byte of storage decreases exponentially and the value of staked ETH increases exponentially (via staking rewards), then as long as the price of ETH doesn't crash exponentially, we have the storage already paid for.

To put it another way, do we have any hard evidence that the current methods of paying for storage are not sufficient? Yes storage on ethereum is storage forever, but the value of money typically increases over time, which is why interest rates are usually positive exponential. Ethereum makes this easier by providing a way of calculating the per-time value of ether, the staking reward. Even if the cost of 1 byte of storage levels out at some bottom, the staking of ETH should more than make up for those storage costs, assuming it doesn't crash in such a way as to make the staking sub-linear in USD.

Maybe I'm missing something important here about the problem rent is supposed to be solving.