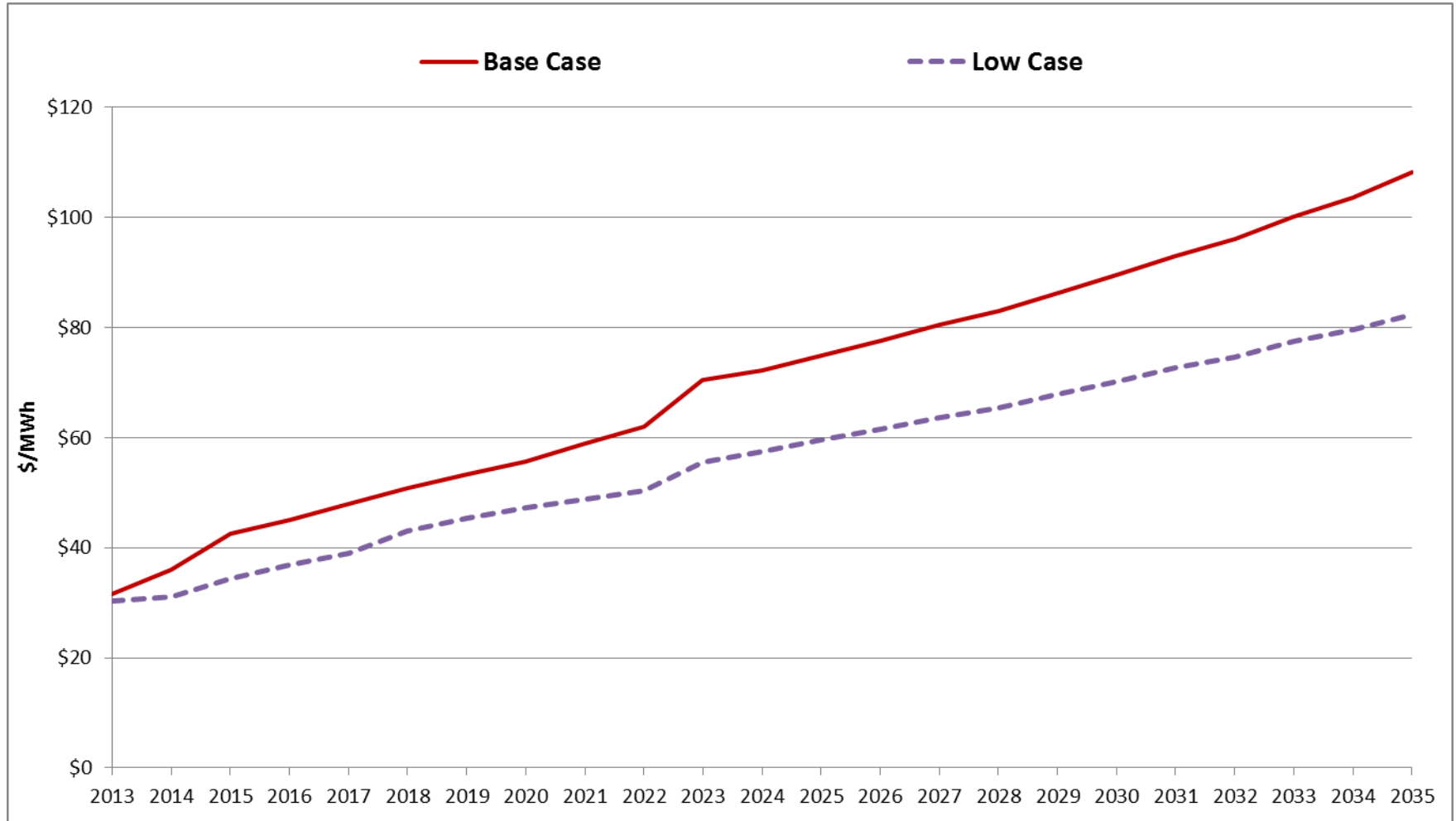


Market Valuation and Transactions

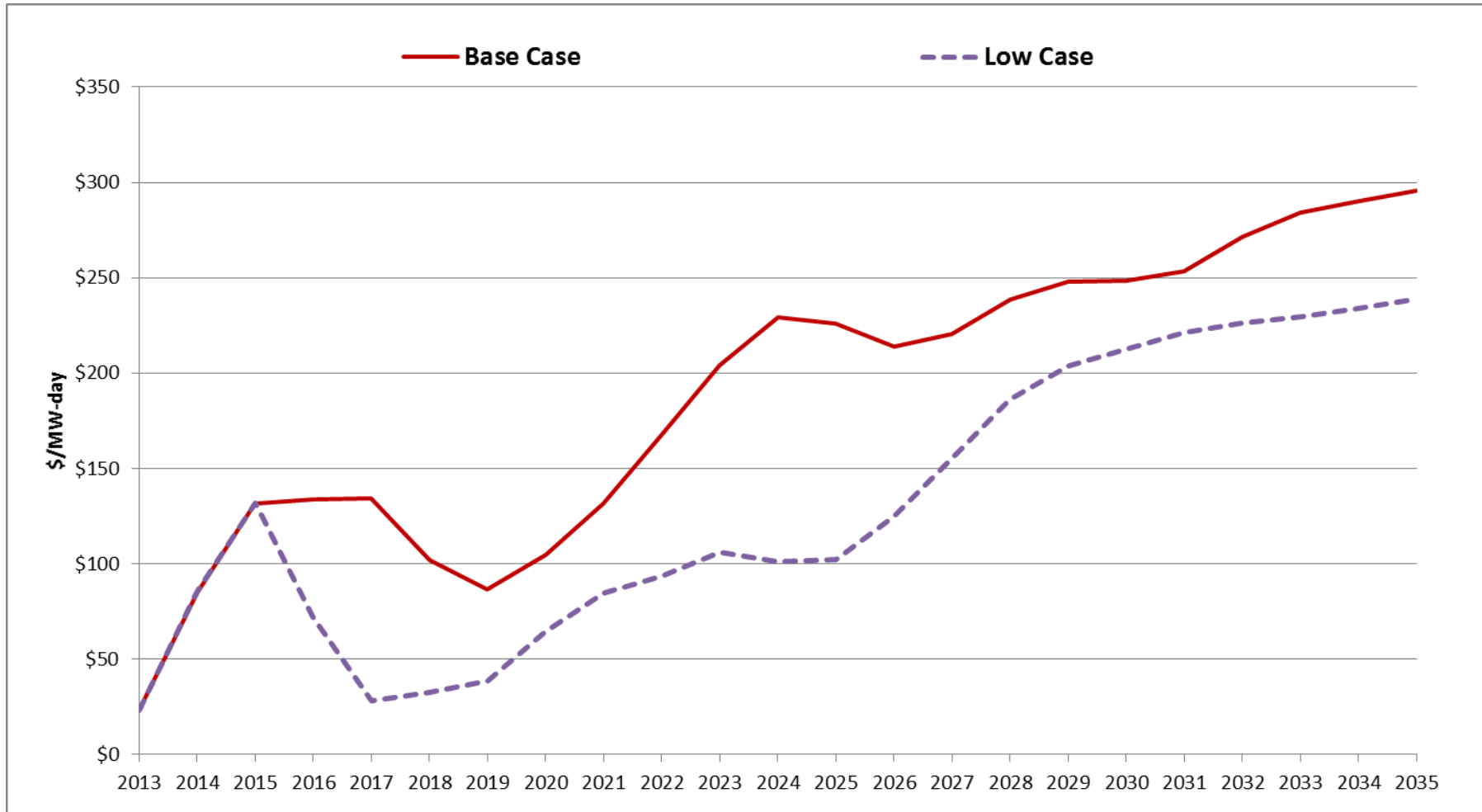
- Market price forecasts are a critical piece of the puzzle
 - estimate the value of a plant's energy and capacity
 - market valuation and profits from sales over and above utility's requirement (i.e. off-system) used to justify plant's sale or emission control investment
 - Off-systems sales revenue is often treated differently in modeling vs. reality

- Market value means what the plant could sell for on the open market
- A seller will use market value to show that a utility's ratepayers would be getting a great deal if they bought the plant
- This argument relies on projections of market energy and capacity prices

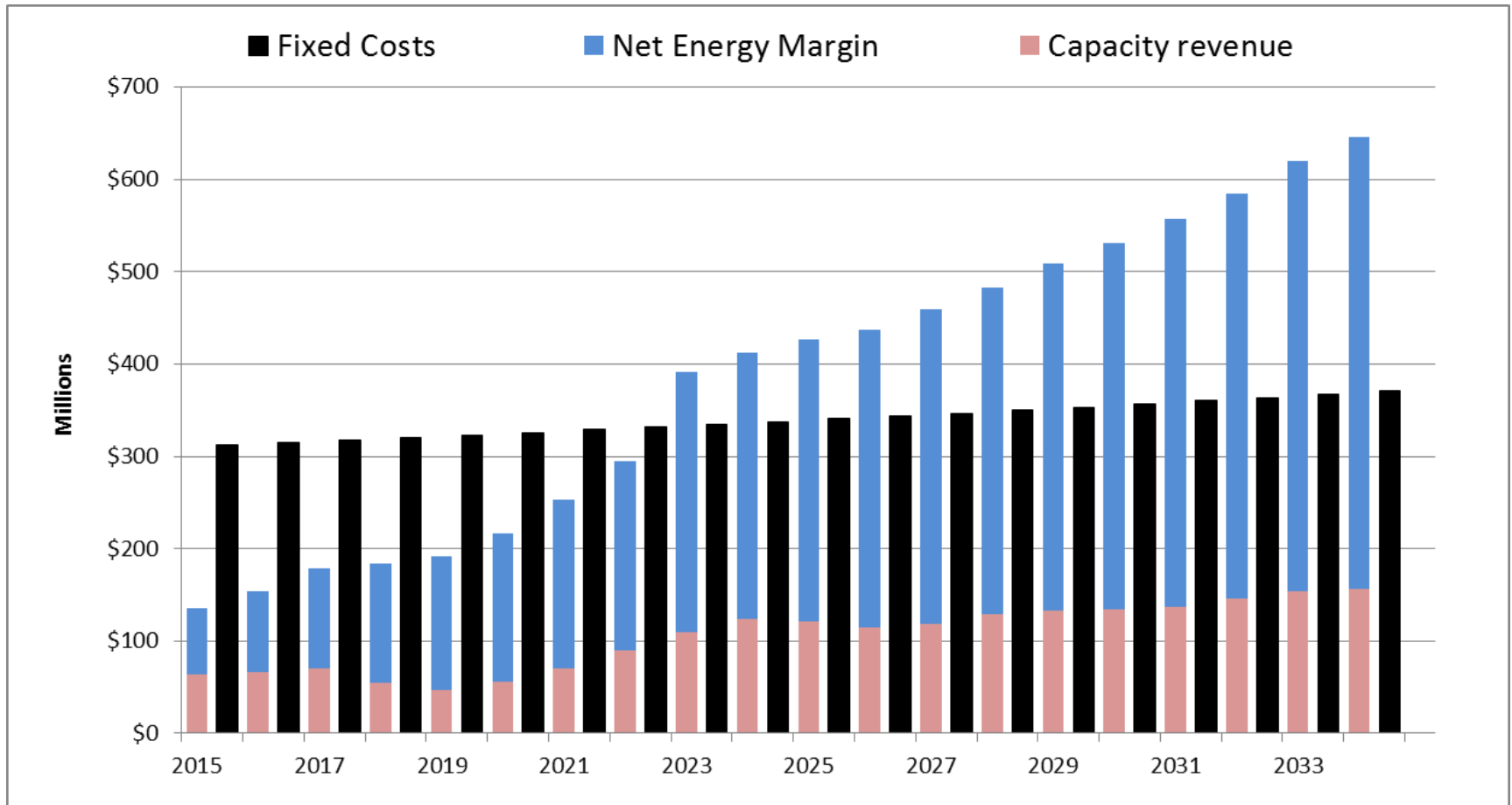
Energy price forecasts



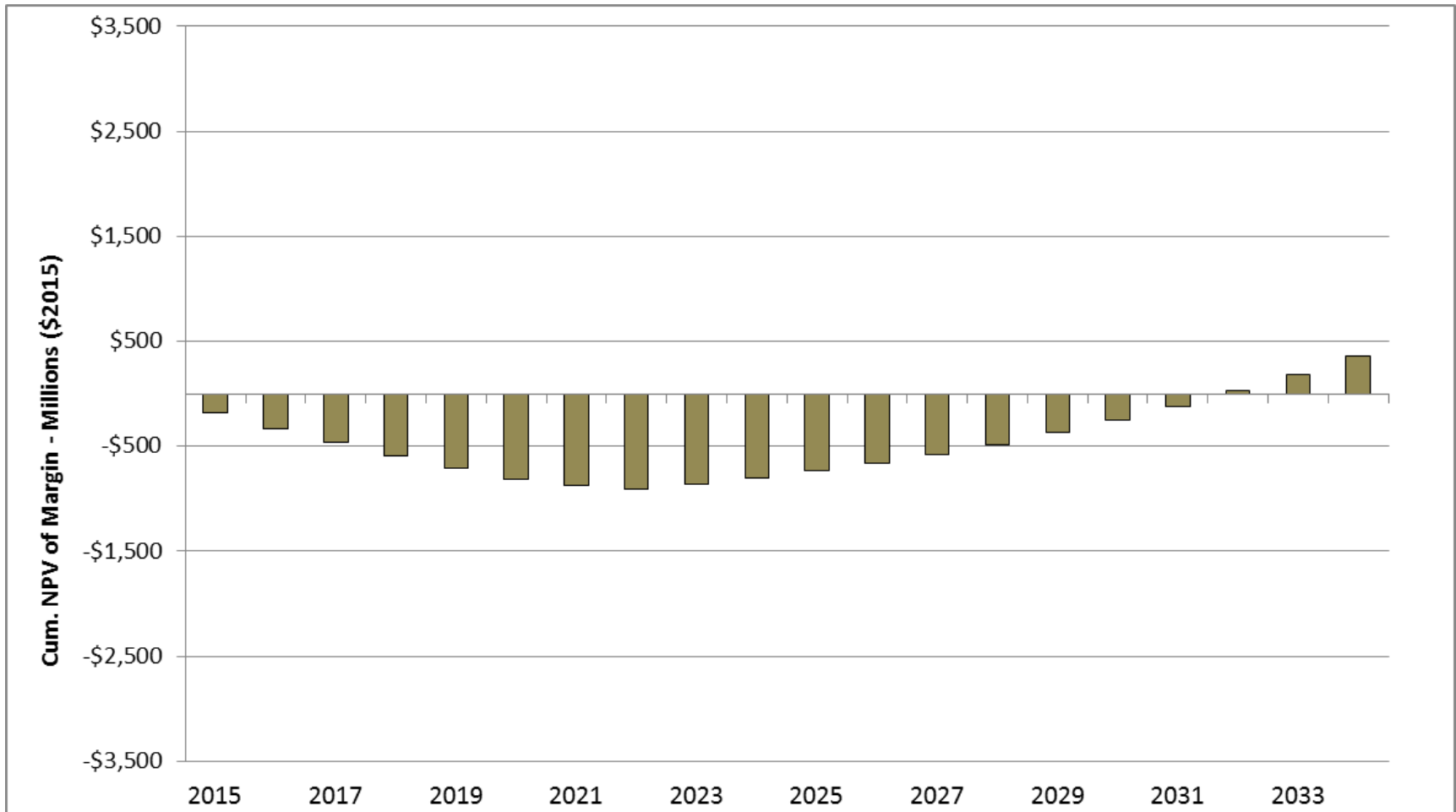
Capacity price forecasts



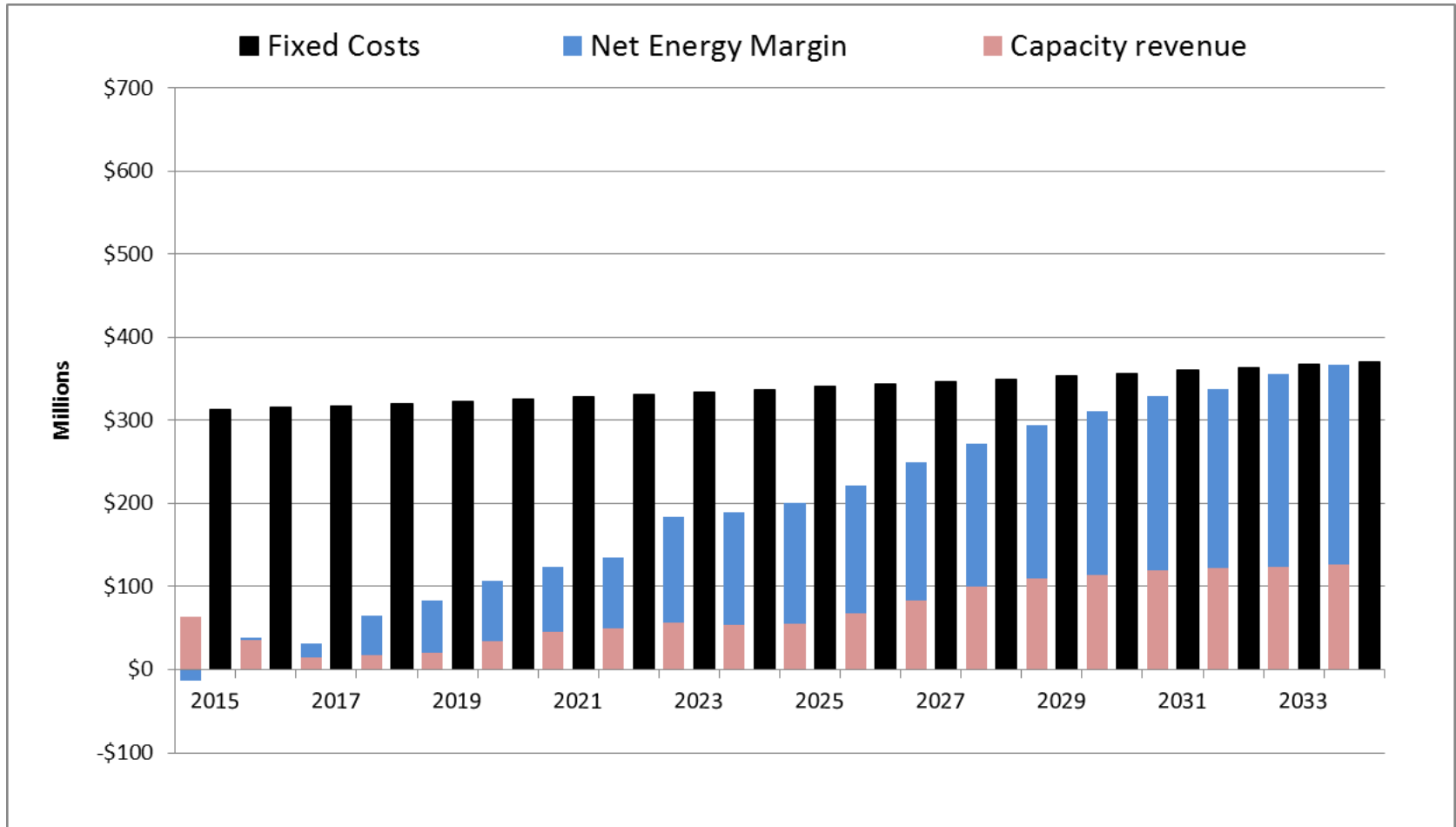
Annual margin with Base Case market prices



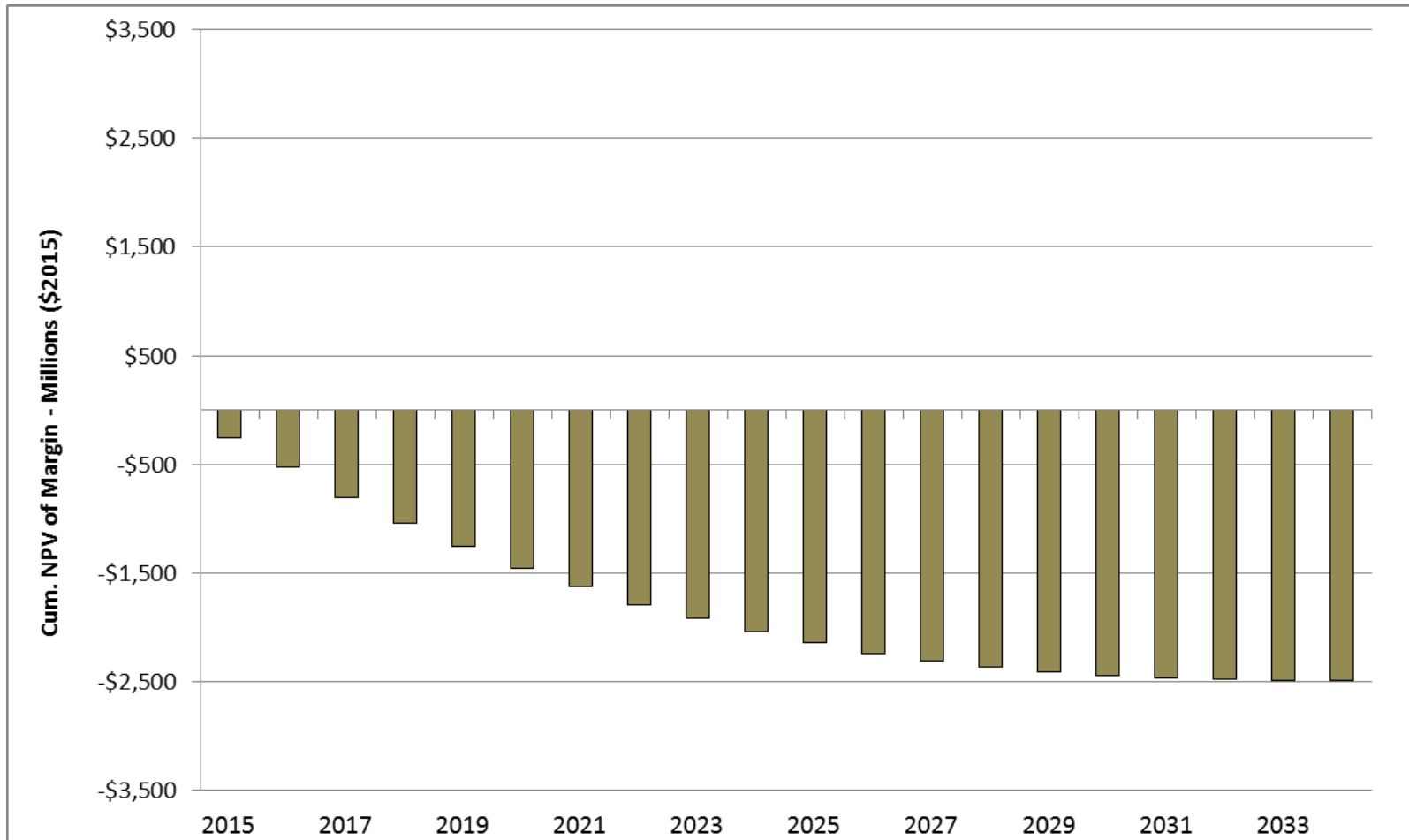
NPV with Base Case market prices



Annual margin with Low Case market prices



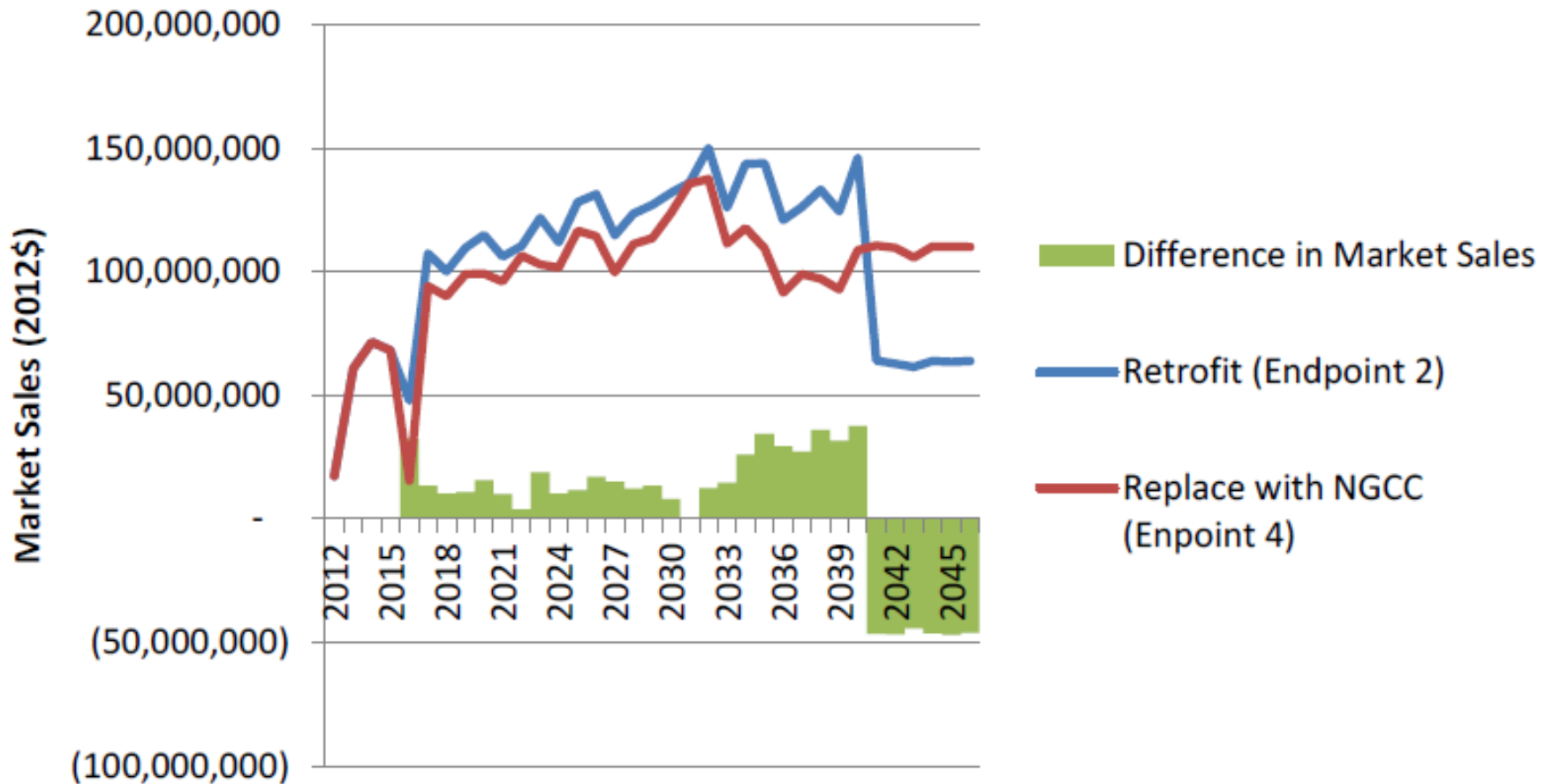
NPV with Low Case market prices



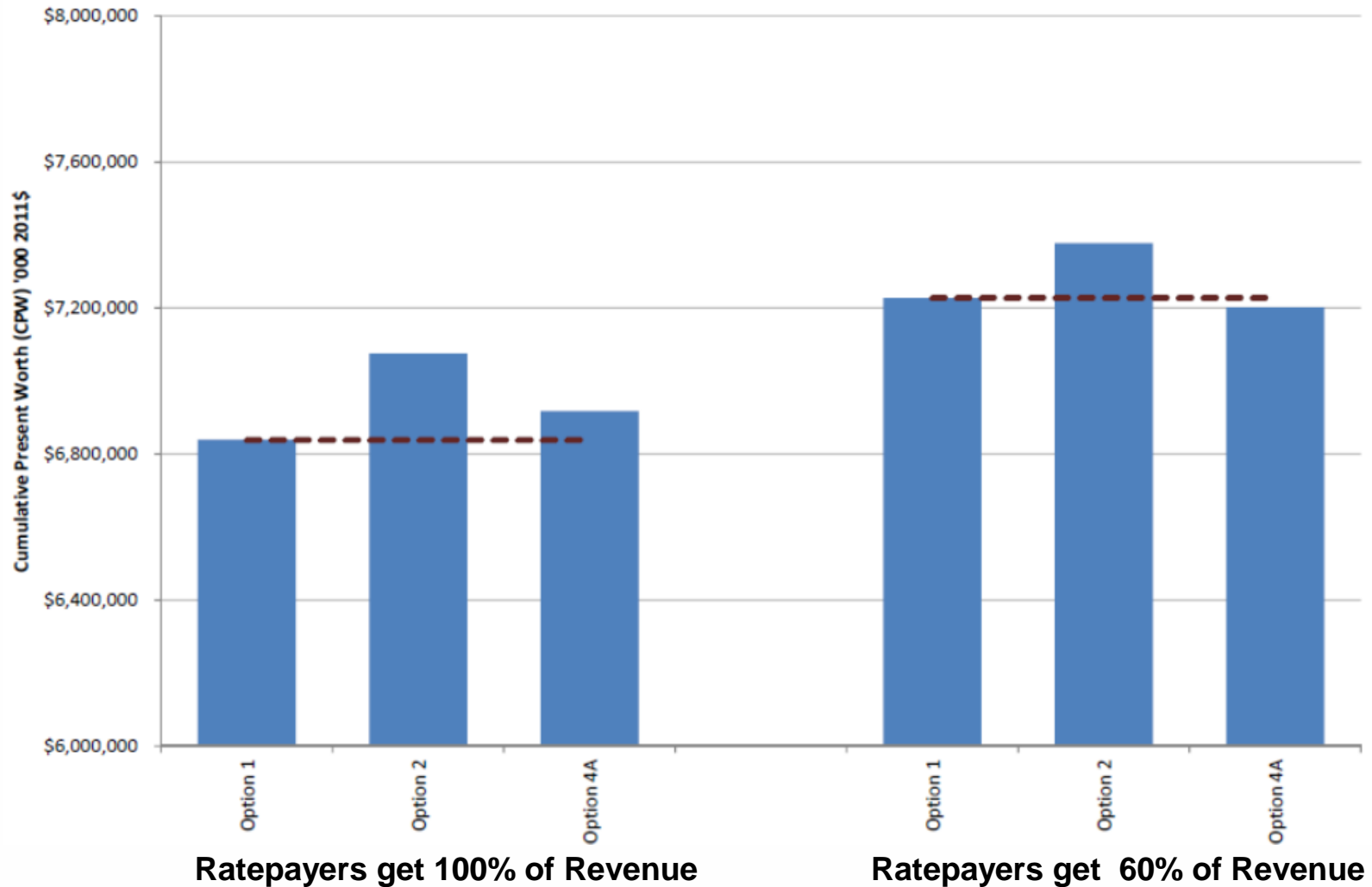
Balancing market sales and purchases

- Off-system sales/purchases
 - Utility sells/buys power outside of their service territory for hours when they have a surplus/deficit of generation to meet their load
 - Net off-system sales are often the underlying justification for retrofitting instead of retiring (or over-building):
 - The higher the energy price, the more they can dispatch their units and sell off-system—this makes their baseload units look better.
 - This also helps them argue against using market purchases to fulfill their future energy needs—“it’s too risky”

An important factor in a utility's analysis



How are the costs and revenue allocated?



Conclusions

- Market price forecasts are often a critical piece to a utility's case
- Projecting high market prices allows utility to justify investing a lot of money in the plant
- They also claim they are protecting ratepayers from high prices in the future
- Make sure you know where the money from market transactions actually flows
- Sometimes shareholders get all of the profits and ratepayers take on all of the risk