



BOD 9d – Analysis of Climate Change Proposed Legislation

Board of Directors

September 16, 2021

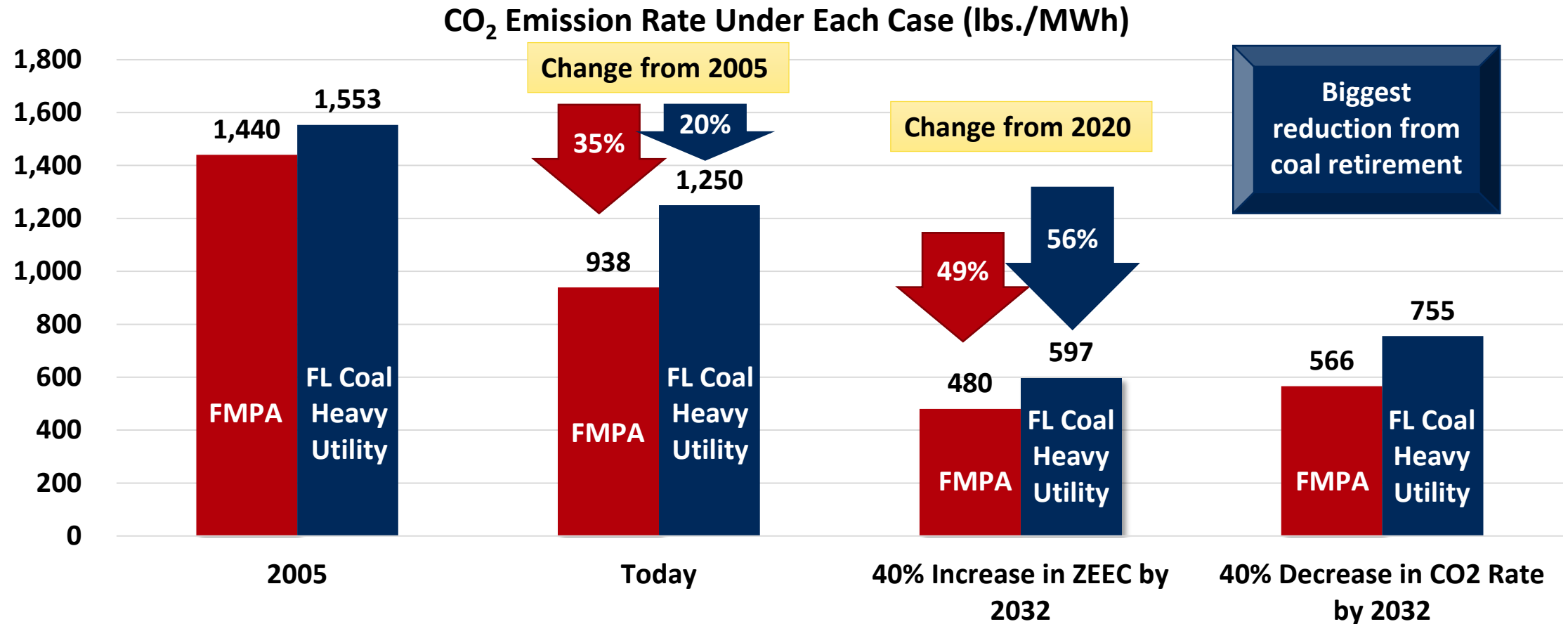
Climate Change Proposal in Budget Resolution

Extremely Aggressive and Costly Increase in Renewables over Next 10 Years

- Climate Change Budget Resolution proposal is a 40 percentage point increase in net-zero CO₂ resources to the generation mix in 10 years
- For FMPA, that means going from 5% net-zero resources today to 45% by 2032
- No credit for switching from coal to gas – must be to net-zero resource
- Such a proposal would raise costs by 70 – 100% above the expected costs by 2032 – tremendous demand for commodities and labor escalating costs
- Florida would have a near impossible task in next 10 years of adding:
 - ~50,000 MW of solar– equivalent to entire Florida generation today
 - ~20,000 MW of batteries to capture excess solar during non-summer for night use
- Land availability, use permitting and transmission siting would strain system in many ways – 500 square miles of solar sites need plus transmission to each

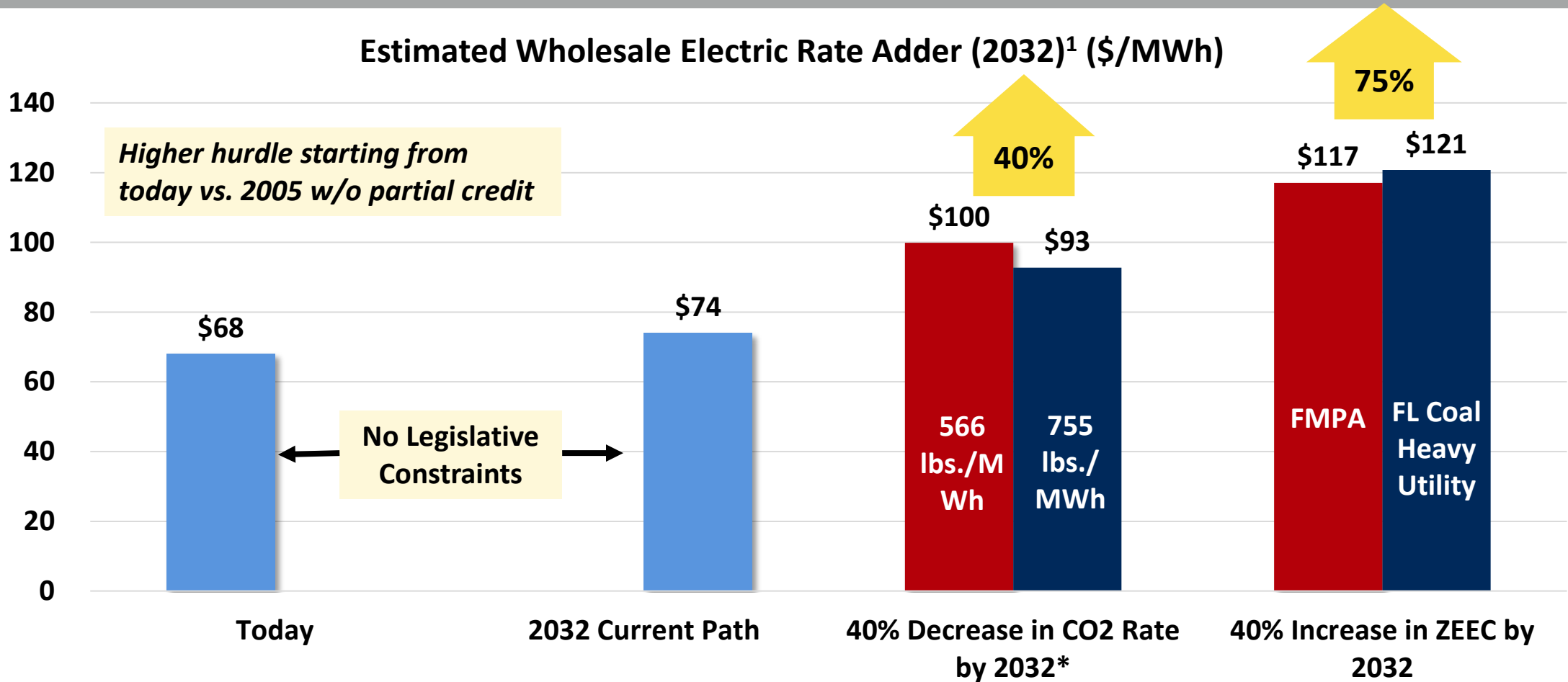
40% Increase On MWh Basis Means Lower CO₂ Rate

16 Pct. Point More Reduction Required for Coal Heavy Example



Less Price Pressure w/ CO₂ Rate Reduction Path

*ZEEC Increase Path Equals ~75% Rate Increase From Today**



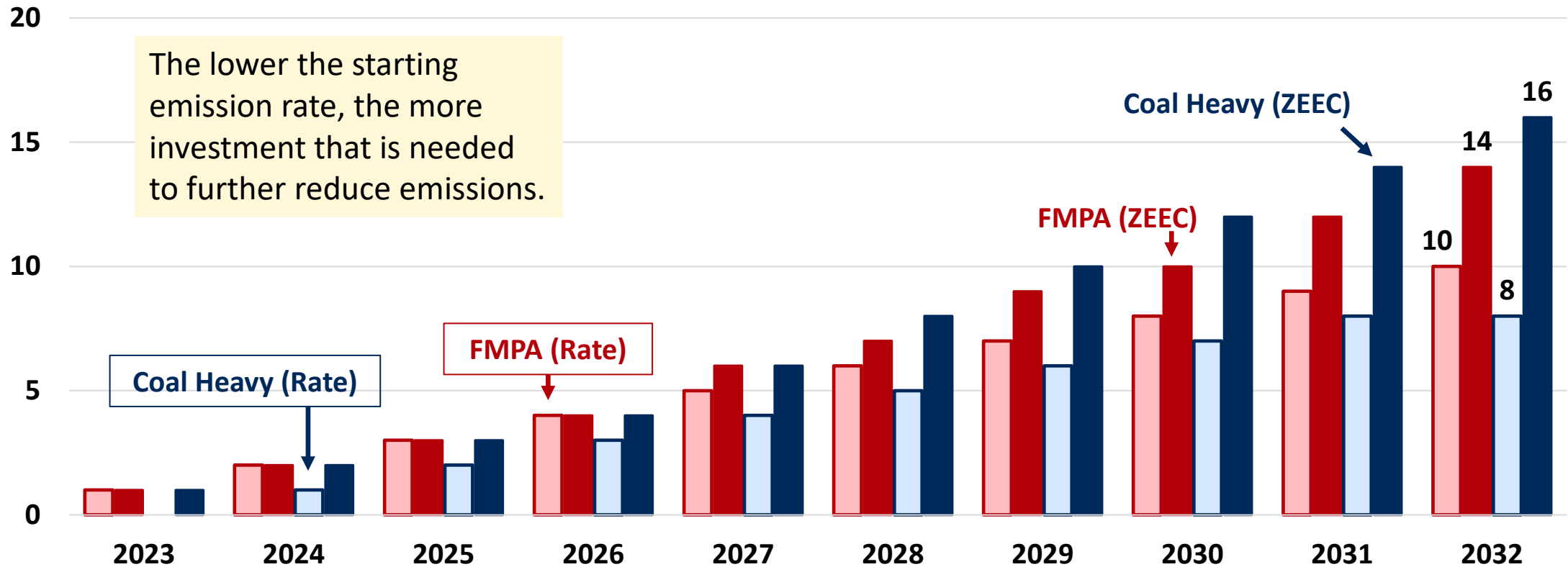
1 - All cases at 3% inflation, No ITC. ITC may help provide a small cost offset on amortized solar assets.

*Performance payments are included and offset ~\$2/MWh of investment in years received. Gas prices assumed to be reasonable (no escalation in gas prices due to gas shortages).

Massive and Continual Solar Buildout Required

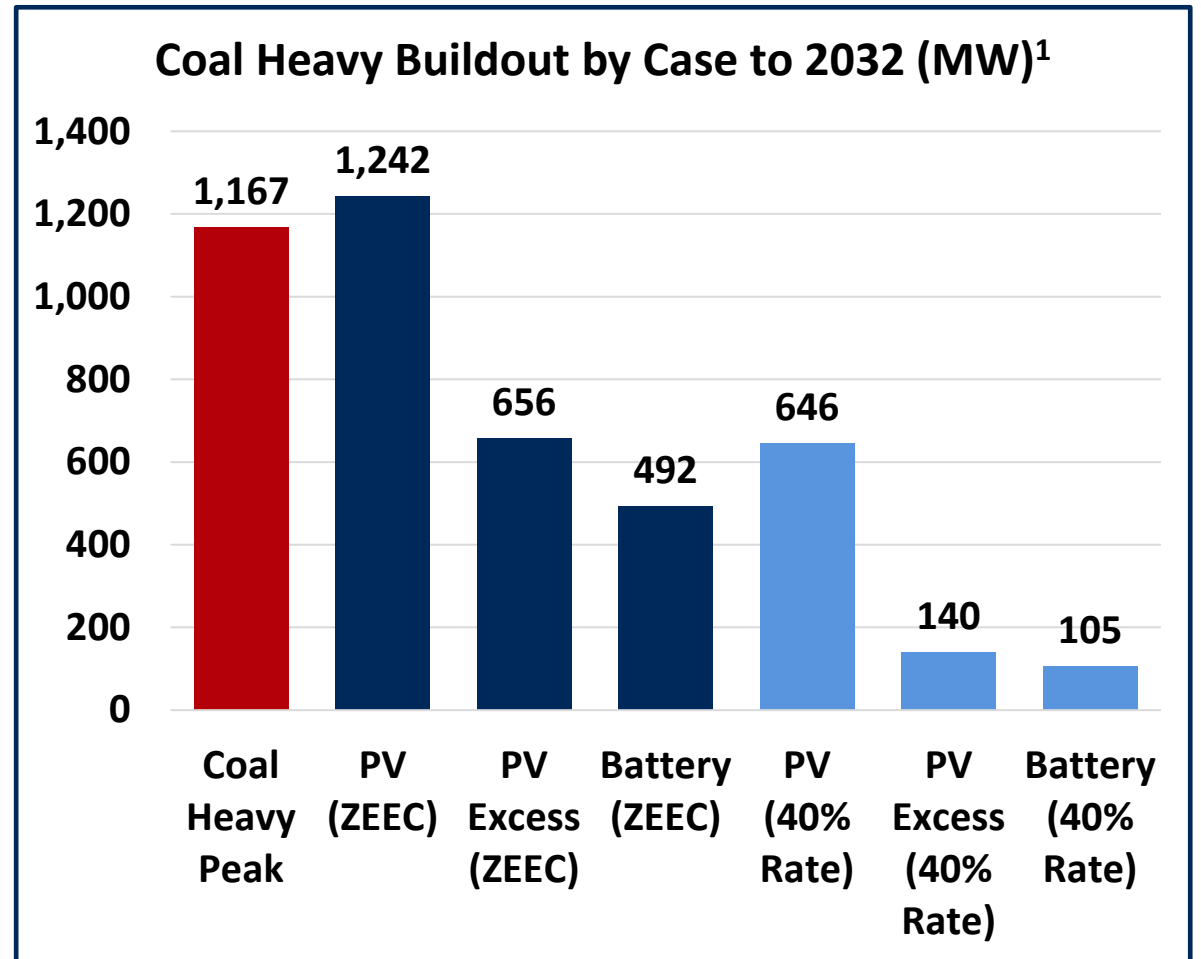
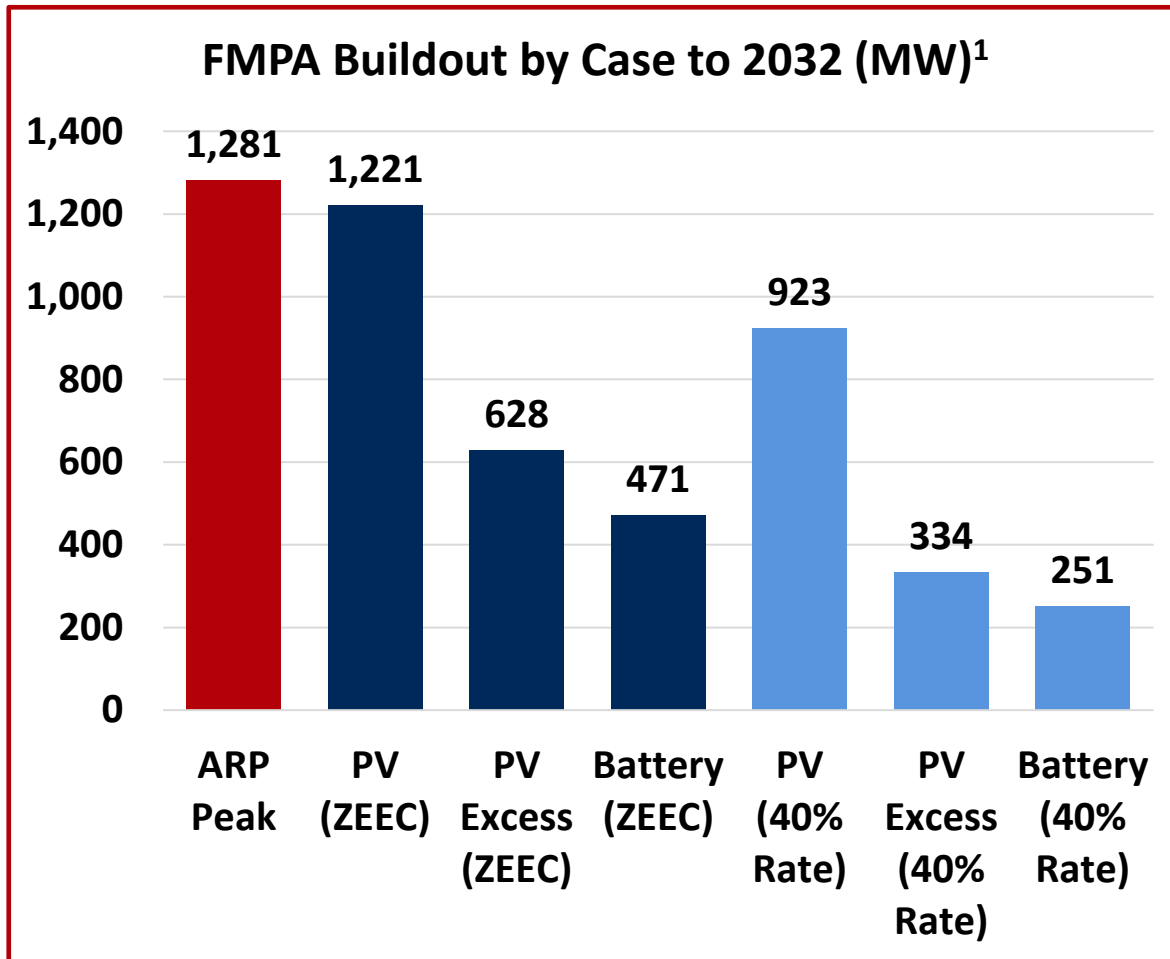
16 Installations Required for Coal Heavy Utility Under ZEEC

Solar Installations (74.5 MW per Site)



Renewable Capacity Exceeds Peak Load in ZEEC Case

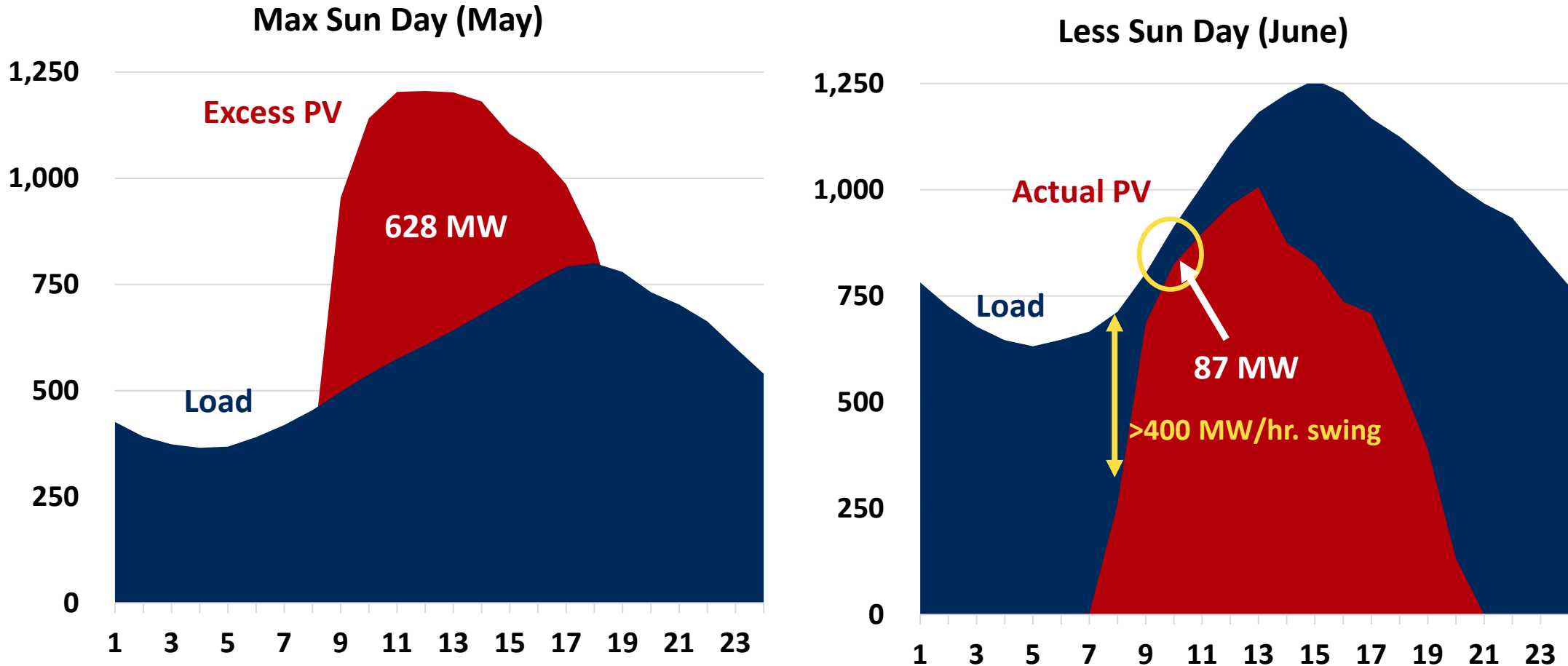
Further Overbuild Required for Lower Starting Emission Rates



1- Battery cost modeled as two (2) 4-hour batteries at capacity shown. PV excess could be greater depending on the need to avoid cycling or turning off base load generation.

Storage to Capture PV Significant with ZEEC Approach

*PV Eclipses Load to Serve, Must Curtail or Store the Excess**

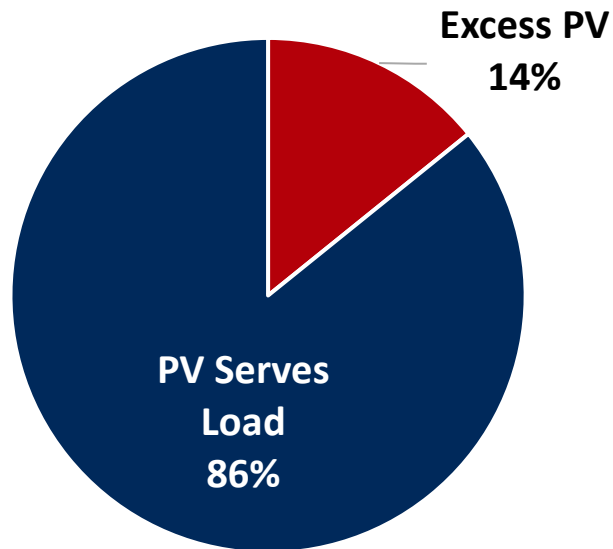


*Actual PV excess may be greater than shown as a function of avoiding cycling or turning off large baseload generators (e.g., nuclear).

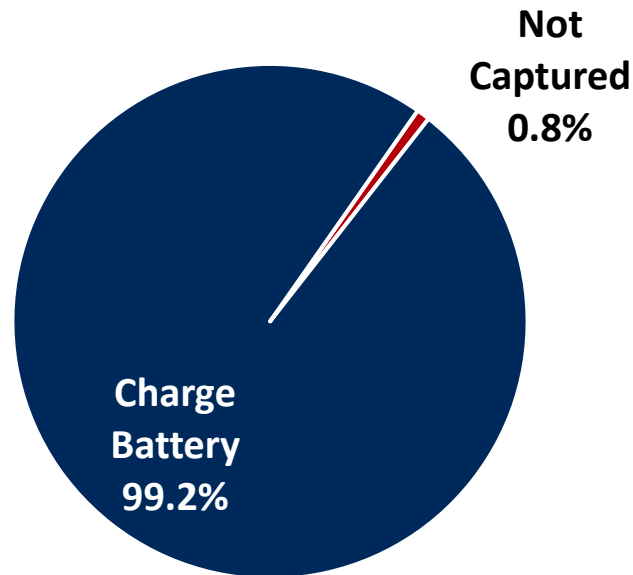
Storage is Best Current Solution to Capture Excess

Battery Capacity of 75% of PV Excess Peak Cover Most Excess¹

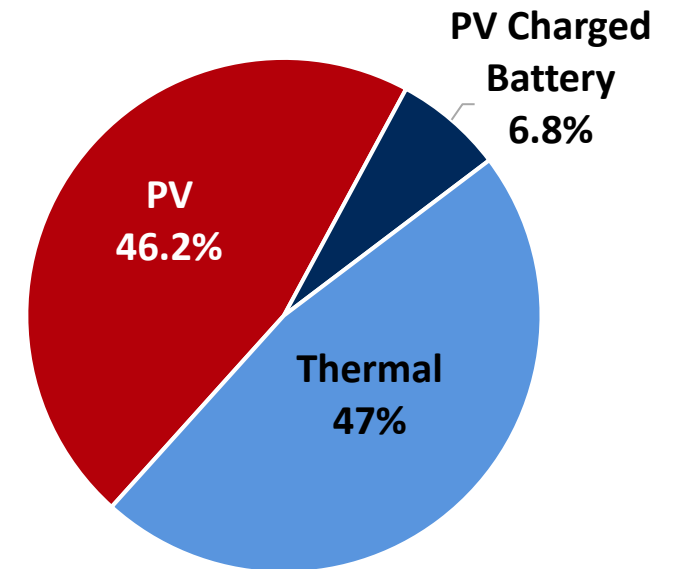
PV Utilization w/o Storage



Excess PV for Storage



Load Served by Source



1 - 471 MW, 8-hour battery with round trip efficiency of 90%, financed over 15 years was modeled. 40% Increase in ZEEC for FMPA case is shown. Calculations assume that PV serving load displaces thermal generation.

Source: EIA Table 8.2 and Lazards levelized cost of storage version 60 vf (2020) and version 50 (2019)