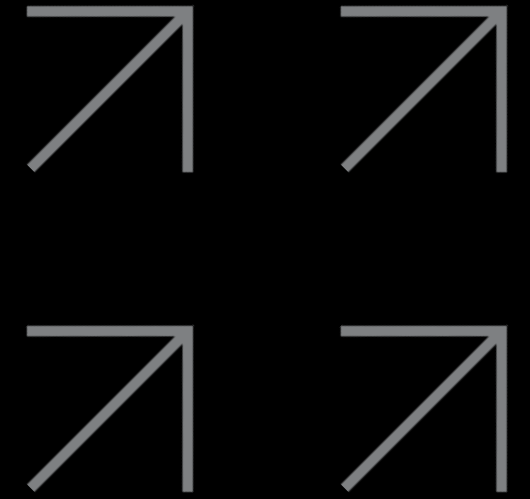


## DER Integration for Transmission and Distribution Services

### ESIG Spring Technical Workshop

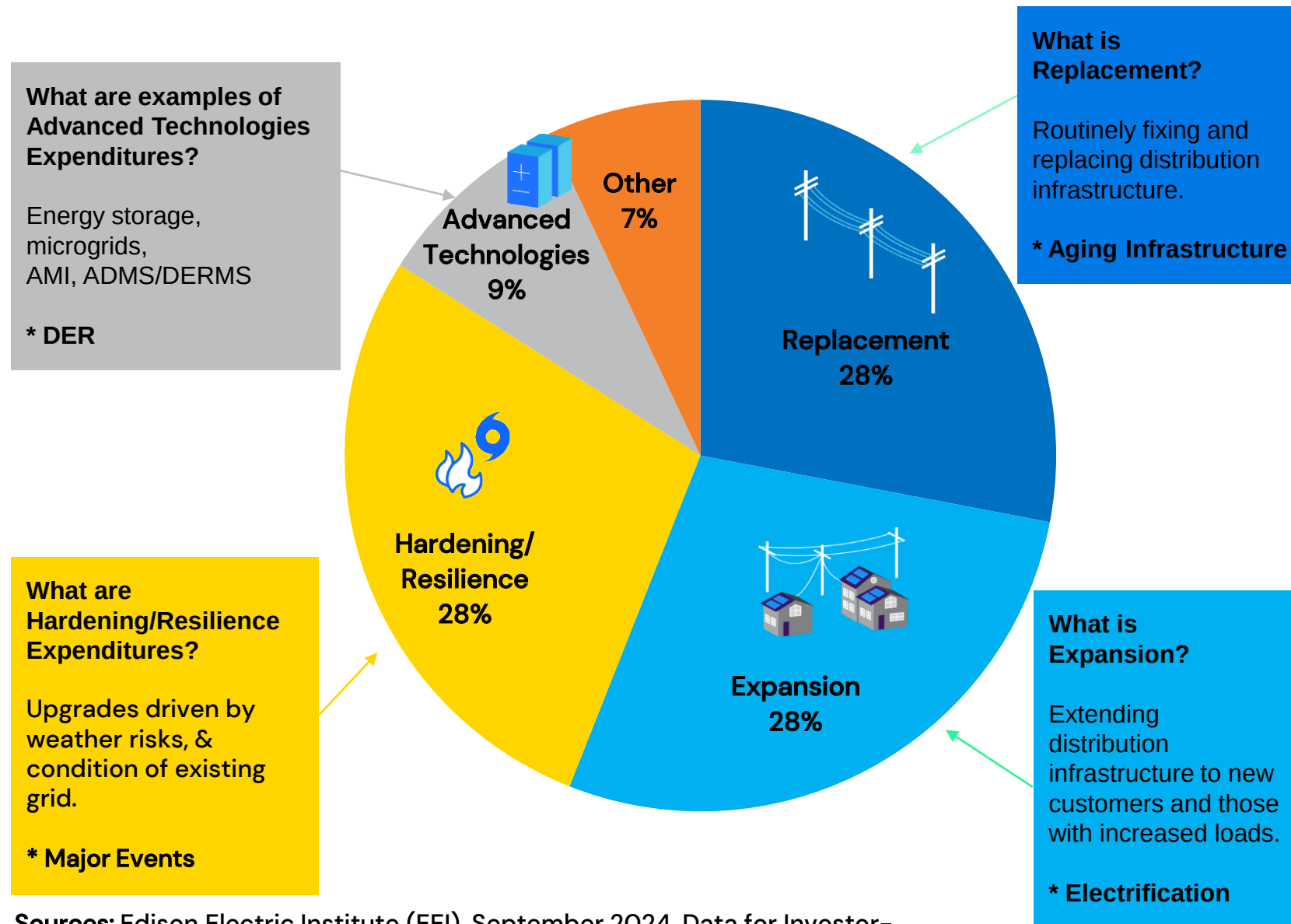


Darren Murtaugh  
Director, Distribution Strategy

3/18/2025

# Distribution Capital Costs

## DIFFERENT TYPES OF UTILITY DISTRIBUTION CAPITAL COSTS

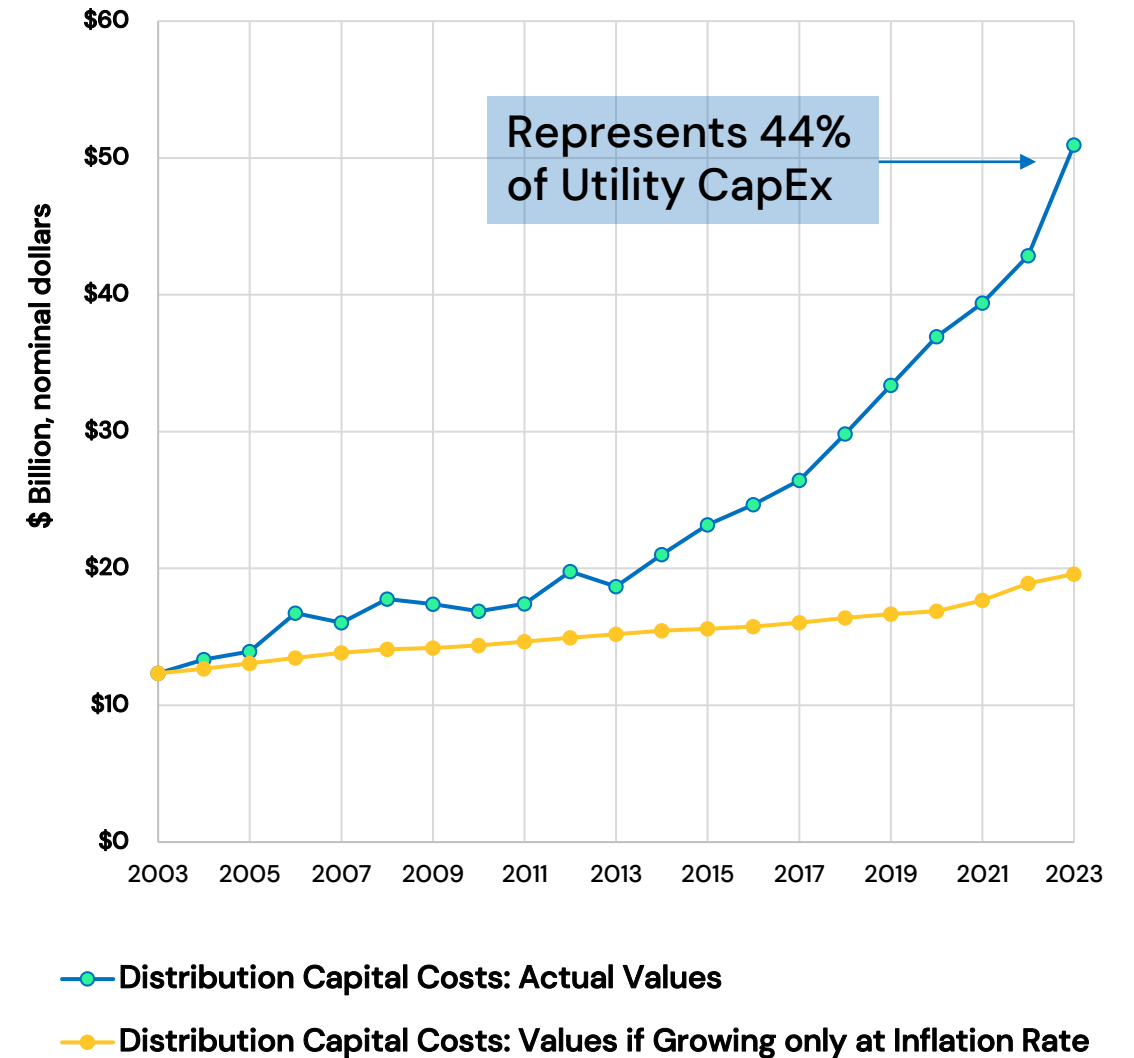


Sources: Edison Electric Institute (EEI), September 2024, Data for Investor-Owned Utilities.



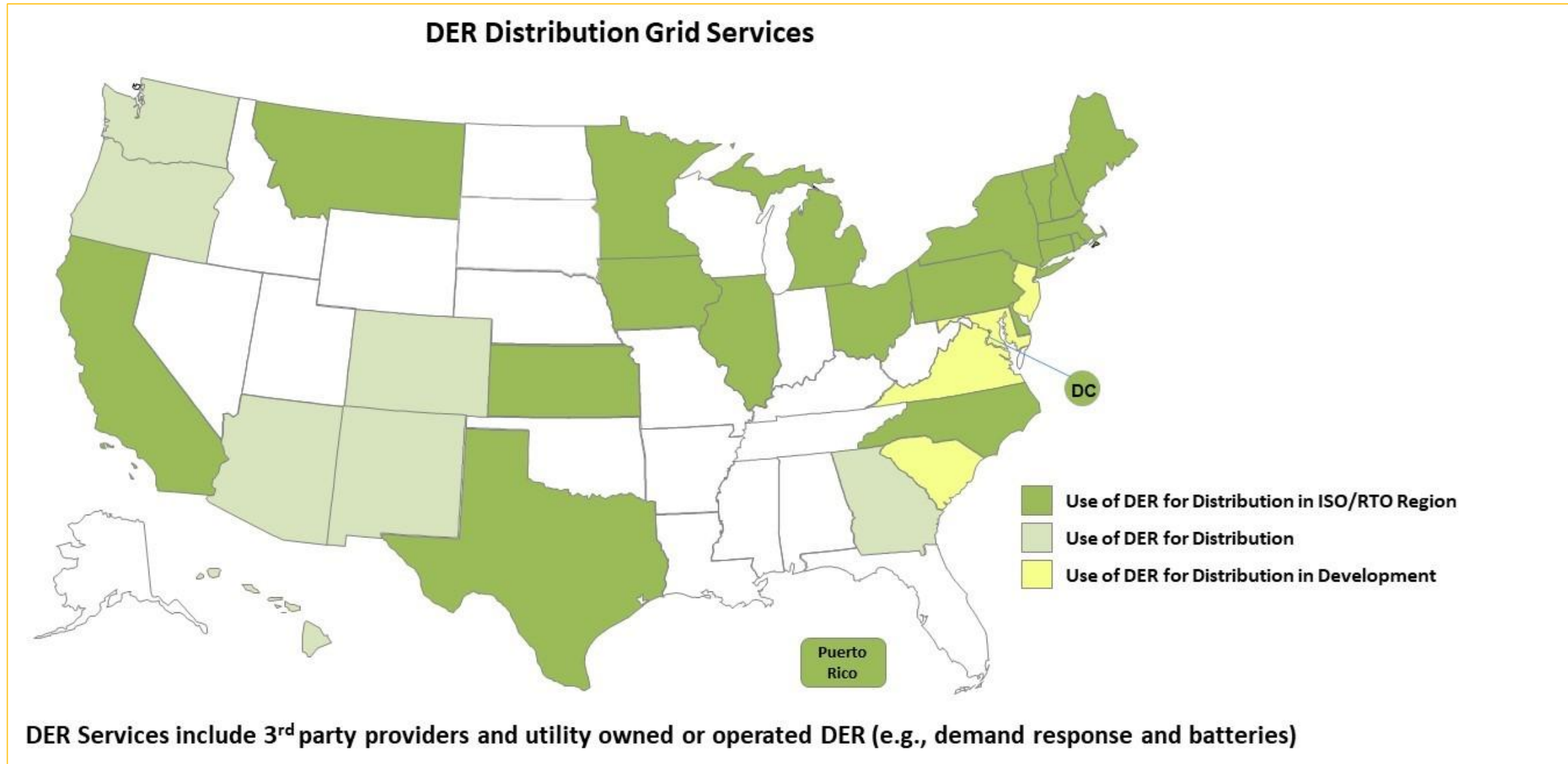
## UTILITY DISTRIBUTION CAPITAL COSTS OVER TIME

Nationally, these costs have risen much faster than inflation



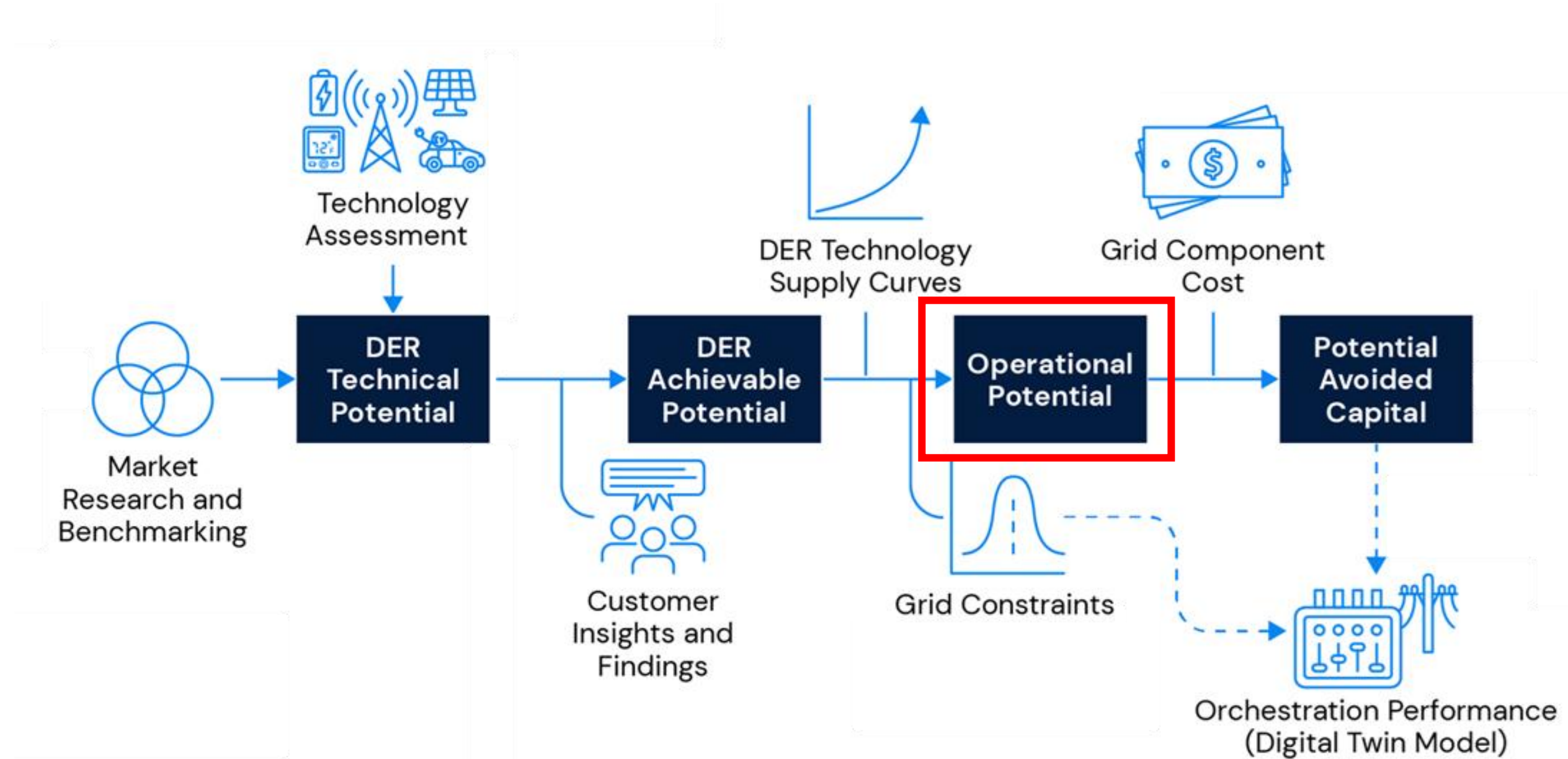
Source: EIA Data, based on Federal Energy Regulatory Commission (FERC) filings.

# Several States Are Exploring Use of Distributed Energy Resources (DERs) for Distribution To Address Affordability and Resilience

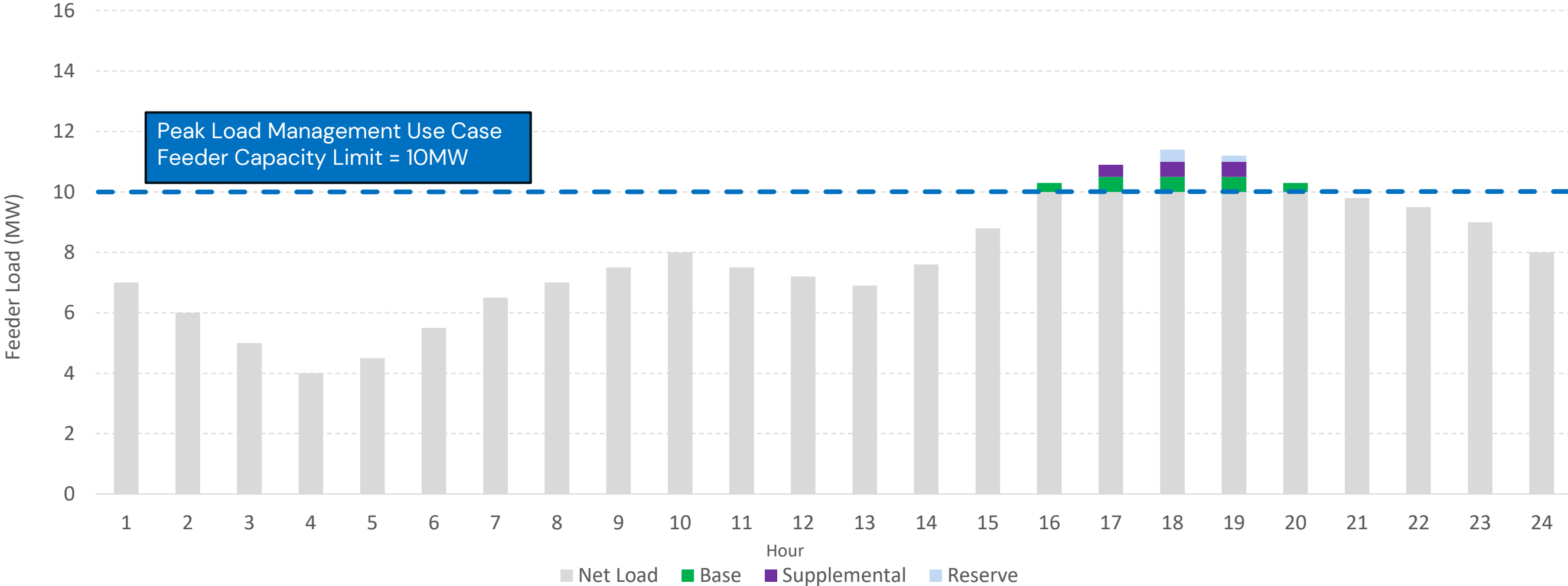


Reliable use of DER services for distribution requires new planning and operational capabilities coordinated with bulk power system planning and operations.

# Operational Potential



# Orchestrated Dispatch



|              |            | Capacity (MW) | Cost (\$/MW) | Availability |
|--------------|------------|---------------|--------------|--------------|
| Base         | DER Type 1 | 0.3           | \$800        | 4PM to 10PM  |
|              | DER Type 2 | 0.2           | \$700        | 5PM to 7PM   |
| Supplemental | DER Type 3 | 0.4           | \$1,200      | All Day      |
|              | DER Type 4 | 0.1           | \$800        | 4PM to 10PM  |
| Reserve      | DER Type 5 | 0.5           | \$1,700      | All Day      |