



# **Distributed Energy Resources: Status Report on Evaluating Proposals and Practices**

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# Presentation Outline

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- Utilities face seven major, related challenges
- Three major utility responses: (1) wait & see; (2) play defense; (3) play offense
- In over 40 states, legislatures, regulators, and utilities are already planning or taking action
- Some tools exist to model the effects of changes on customers, utilities, DER businesses, and society at large, but new modeling tools are needed

# Seven major challenges

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1. Aging infrastructure needs replacing
2. Environmental regulations tightening
3. Load and load factors are flat or declining
4. Grid modernization is coming
5. Distributed energy resources growing
6. Net metering reviews are triggering in many states as caps approach
7. More customers are demanding clean energy purchasing



# Three major utility responses

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1. Wait & see
2. Play Defense: Support changes in incentives and rates to slow DER growth
3. Play Offense: Join efforts to expand DER, including new business activities



# Current proposals & actions

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- Fixed charges or demand charges (for all customers, solar only, or all DG) [ $\sim$ 25 states, >40 utilities]\*
- Revisit net metering [26 states]
- More general DER policies [9 states]
- Community-shared solar [11 states]
- Third-party ownership [5 states]

\* Numbers count only new proposals or actions since 2014, now totaling over 100 actions in 43 states plus DC.



# Requested Changes in Fixed Charges

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- 12 states\* issued final orders for 19 utilities
  - Requests were rejected or cases settled without increases for 8 utilities, with requested increases ranging from 10% to 21%
  - Requests were approved for 11 utilities, with increases ranging from 15% to 70%
  - Approvals were often for 1/2 or less of the initial request
- 17 states\* have cases pending for 27 utilities
  - Requests for fixed charge increases for residential customers (sometimes also small commercial) range from as little as 1/10 to as much as 3 times existing rates
- A recent trend is for utility requests in general rate cases, rather than single-issue cases
  - \* Five states had both pending cases and final orders



## Other proposals...

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- 8 states have ongoing dockets regarding distributed energy resources (DER)
- 20 states have pending cases about net metering rules
  - 11 states have ongoing NEM studies, with legislatures triggering projects in 6 of those states
- New business activities by utilities and affiliates, and their plans for the future, are coming, too
  - Utility-owned rooftop solar is in five states already



# Evaluating proposals & actions

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- Effects on customers:
  - Solar and other DG users
  - Non-DG users
  - Low income
  - Low, medium, high users
- Effects on utilities
- Effects on DER business value chain
- Effects on society at large
  - Economy
  - Environment



- Utilities are facing major challenges. Nevertheless, some utilities' heightened sense of urgency about correcting rate design problems could reflect “irrational exuberance.”
- Rate designs do need changes, eventually, to best adapt to distributed energy resources. Gradual, bigger changes could be best, lessening negative and unintended effects and requiring less backtracking.
- Rate design changes can and should be informed by full analysis of benefits and costs, causes and effects, for customers, utilities, DER businesses and their value chains, and society at large. Good modeling tools exist, but new tools are needed to perform full analysis.