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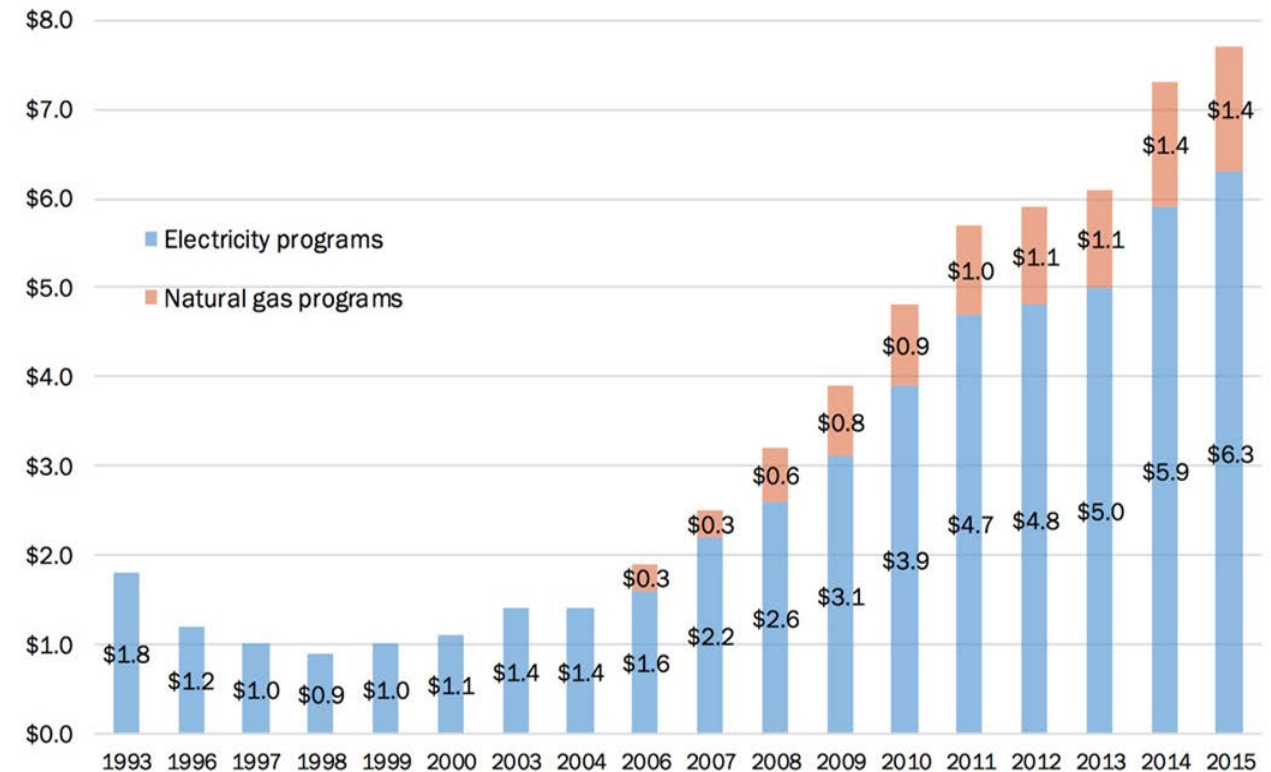
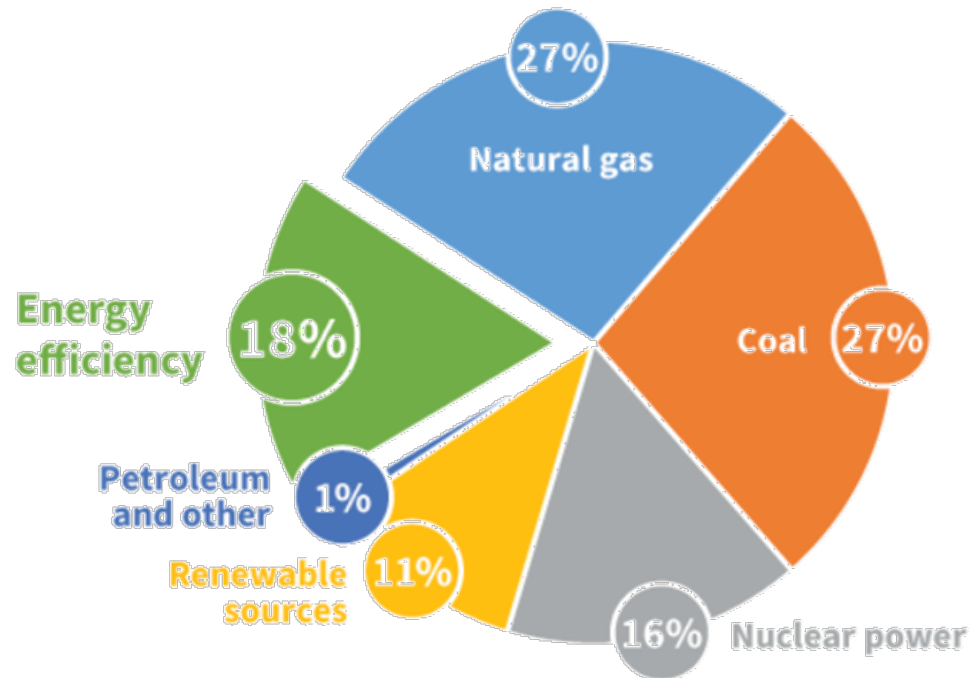
Smart Building Technologies and
the Policies That Support Them

Doug Lewin, VP, Regulatory Affairs
And Market Development
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We change the way people use energy[™]

How do Utilities and Policy Support Energy Efficiency?

- 26 states now have requirements for utilities to attain EE as a resource
- Significant DSM ramp up in 2000s, driven by policymakers
- EE increasingly seen as resource, required and incentivized by states
- More utilities embracing EE DSM programs for customer satisfaction



Supply-Side vs. Demand-Side Resources

SUPPLY



Large baseload plants (e.g., coal, nuclear, NGCC)

Peaker plants (e.g., natural gas CT)

Bilateral contracts and organized markets



DEMAND

"Behind the meter/fence"

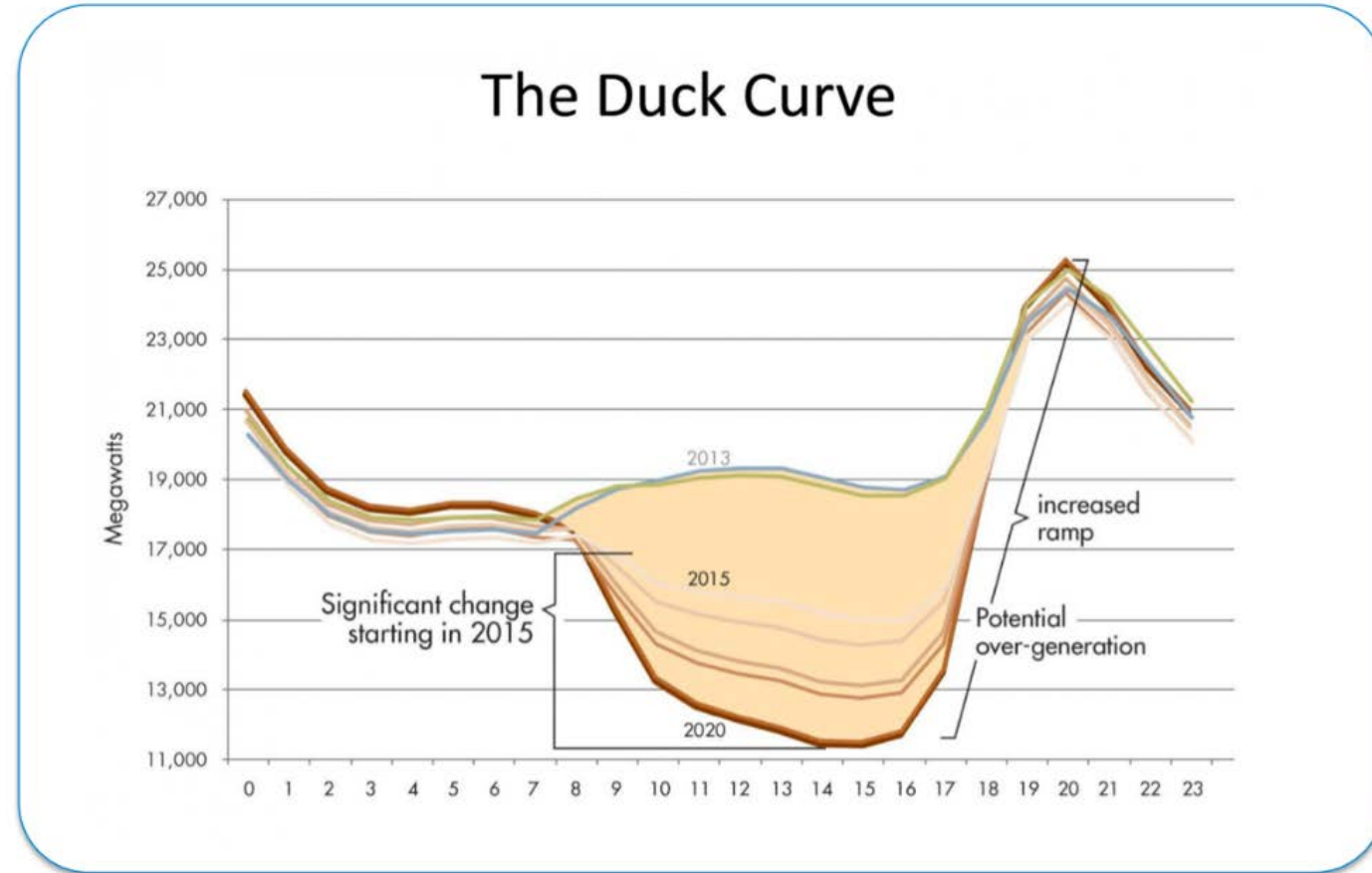
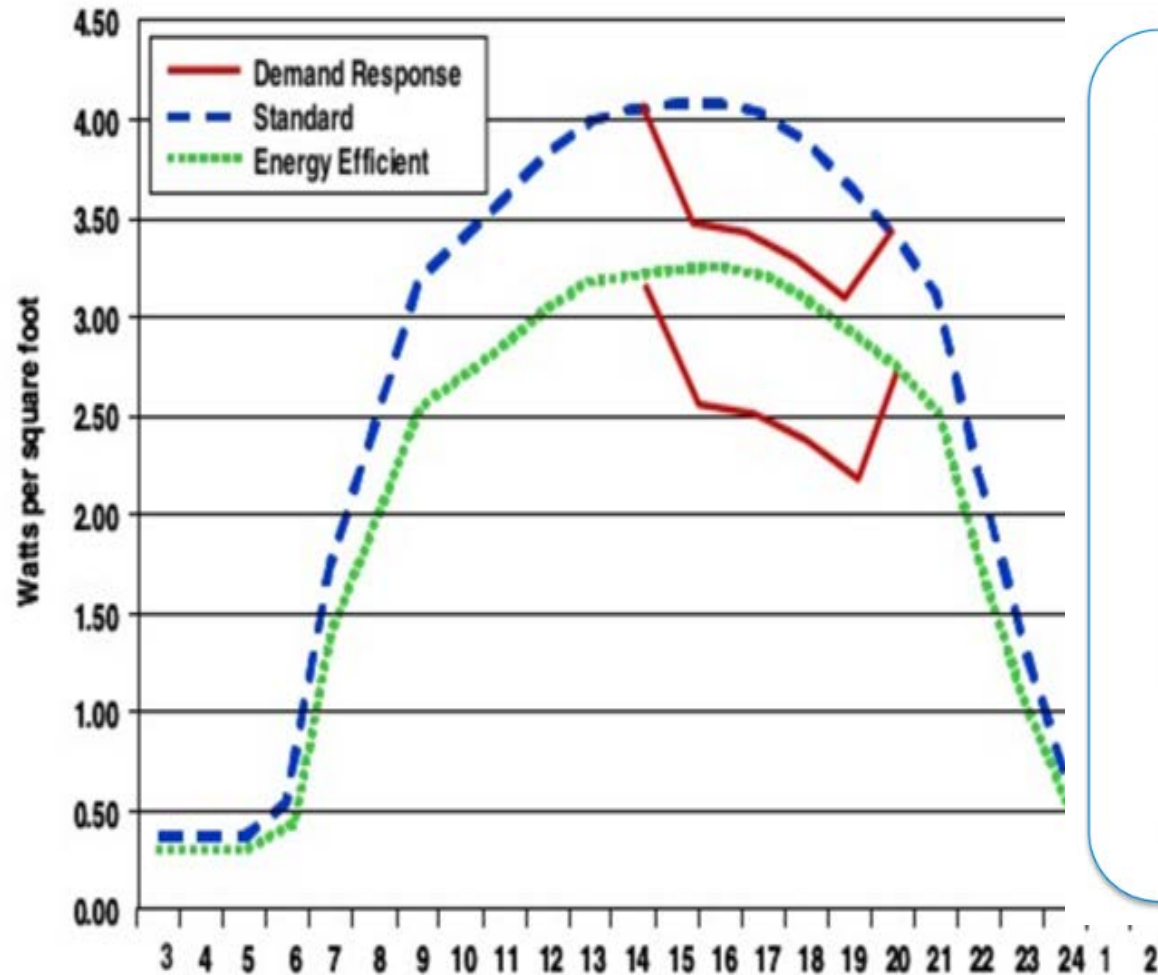


Control quantity of energy used at specific times

Several kinds, numerous benefits

Increasingly able to participate in markets

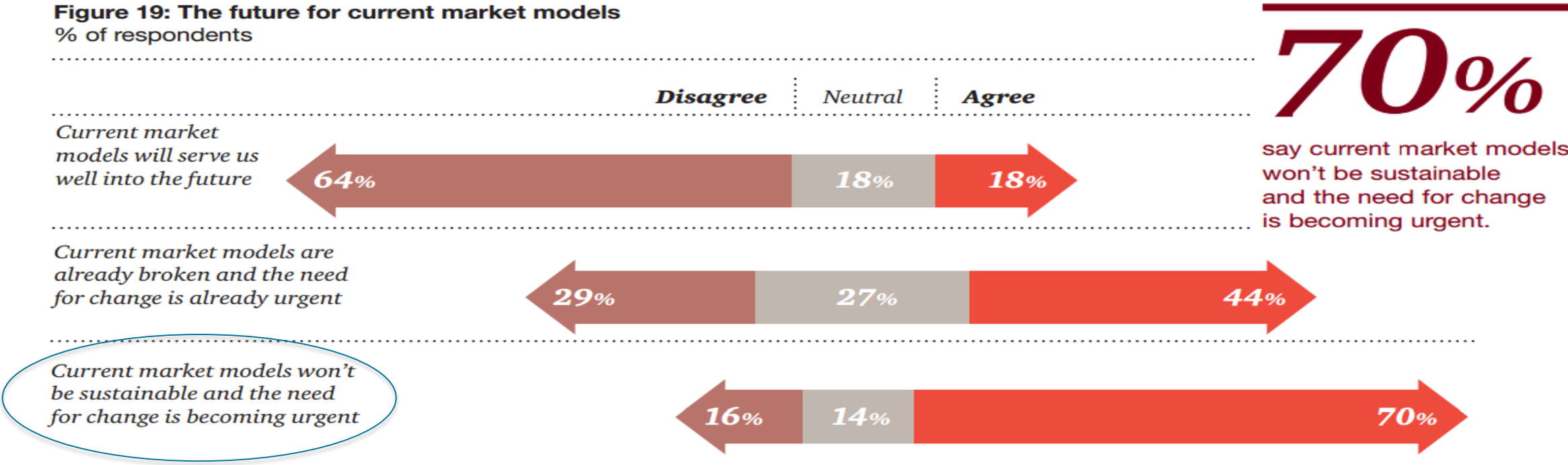
Smart Buildings Can Help Solve Grid Problems



Utility Execs Agree: Current models aren't working

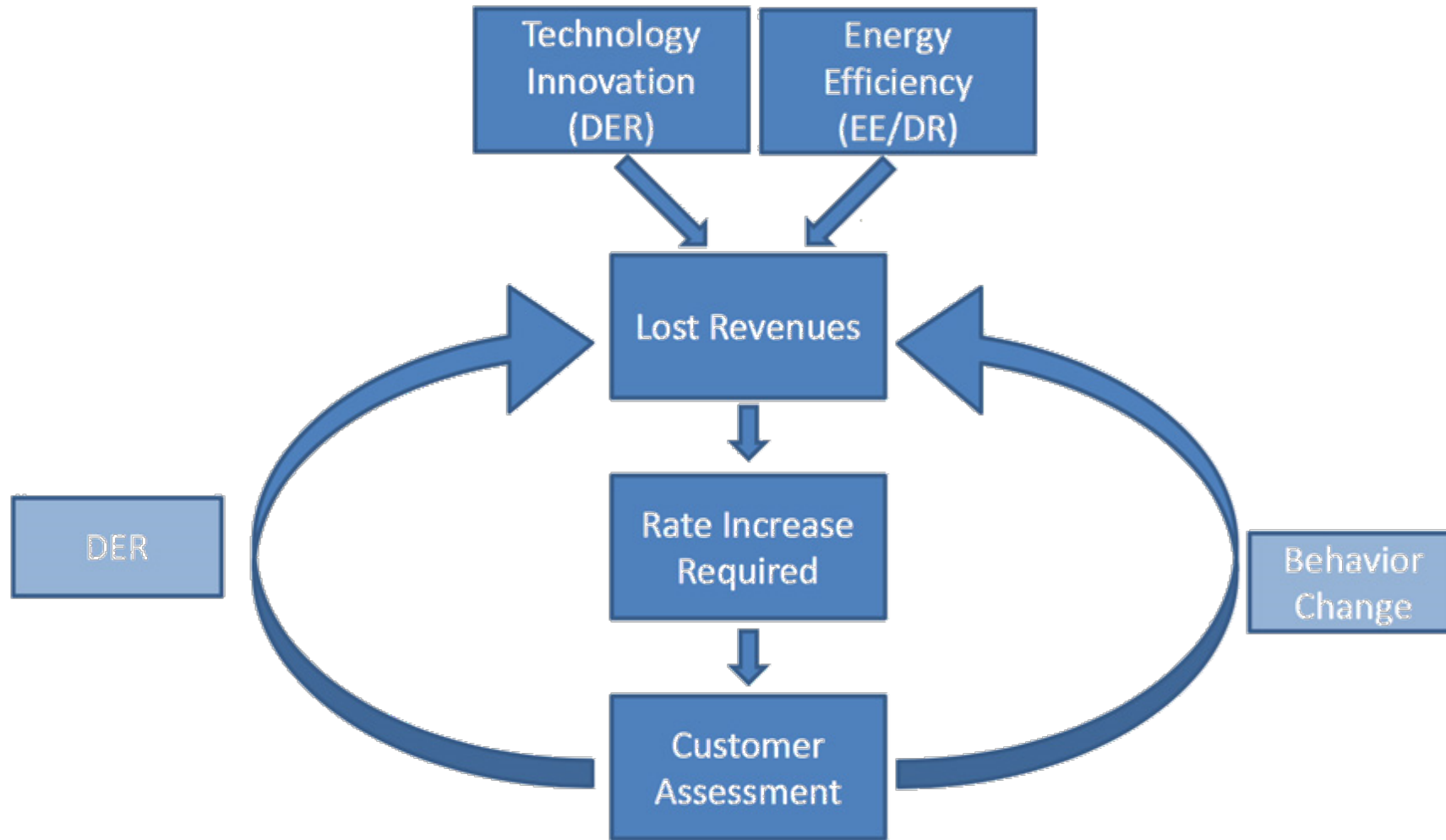
14th PwC Global Power & Utilities Survey

Figure 19: The future for current market models
% of respondents



Rated on a scale of 1–5, where 1 = fully disagree; 2 = partially disagree; 3 = neither agree nor disagree; 4 = partially agree; 5 = fully agree.
Source: 14th PwC Global Power & Utilities Survey

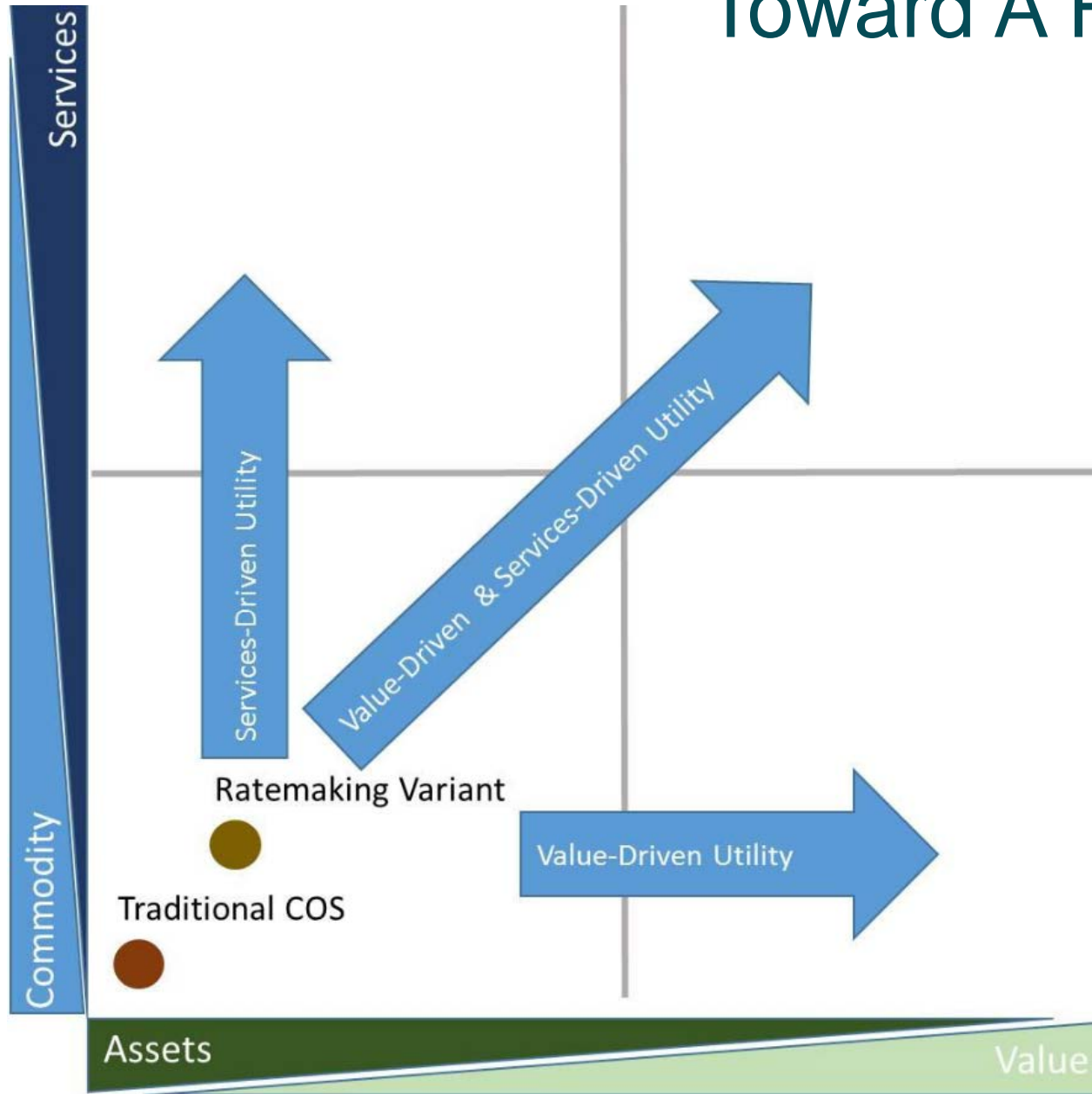
Disruptive Challenges for Utilities



What are DERs?
Distributed Energy Resources (can be defined various ways) generally includes:

- Distributed generation (DG) like solar rooftop panels, combined heat and power (CHP)
- EE
- Demand Response
- Storage

Toward A Focus on the Customer



- Think back to beginnings of utilities' history: it was all about assets and commodities.
- Today, that is changing rapidly and moving toward value and services—but while the pace of change is quick, it's only just begun.
- Many states are taking concrete steps to compensate and incentivize utilities to focus on value and services.



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Thank you