

DER Incentive Mechanisms

As a Bridge to the Utility of the Future

SNL Conference
Washington, DC

December 14 and 15, 2016

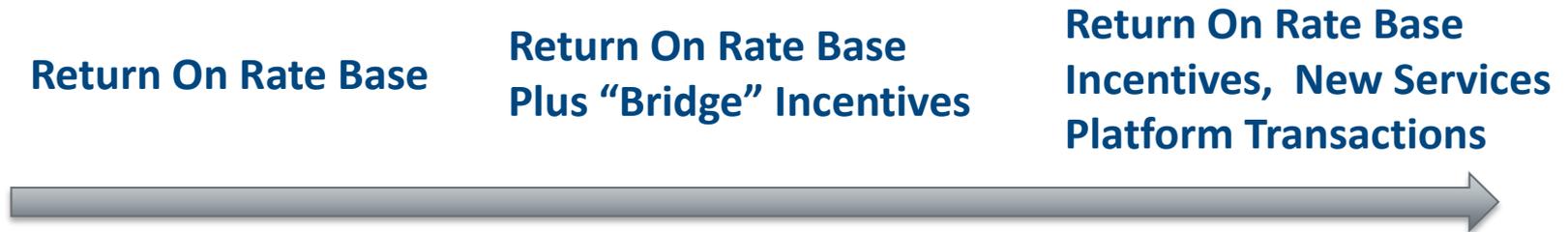
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Evolving Sources of Utility Earnings

Most views of the Utility of the Future (UoF) involve higher penetration and utilization of DERs, which disrupts the traditional model of utility earnings:



- But the “end state” seems to be a long way off
 - Market for DERs is far from established
 - Platform through which utilities will enable transactions from DERs is mostly in the concept stage
- Some regulators (*e.g.*, NY) are considering adding incentives into the earnings equations as a way to prepare utilities for an eventual shift to a more transactive-based business model, which we refer to as “bridge” incentives.

Incentive Structures as a Bridge to UoF

Some states are pursuing increased use of distributed energy resources (DERs) via incentive mechanisms – viewed as a transitional “bridge” to a new business model for the utility industry.

Commonly Stated UoF Goals

Higher levels and innovation in DERs
Market / Customer Animation
De-carbonization
Higher Asset Utilization / Load Factor
Lower Bills
Improved Grid Performance/Modernization

- Incentives are primarily designed to align financial interests of utility with regulators visions of the DER / utility future -- but they also provide an incentive for DER development, or at least make it easier to interconnect DERs with the grid
- Incentives needed because:
 - DER technologies are new, sometimes unproven or unfamiliar
 - Customer adoption may lag economic value (c.f., EE) or may underutilize DER if marginal value to system or value to society not yet fully reflected
 - Long-term pricing, resource planning, and DER acquisition and siting mechanisms not yet established
 - Can offset utility financial disincentives from lost growth and cost recovery due to DERs

Examples of DER Incentives

Incentive	Area	Aspects	Status
EAMs	NY	Target performance metrics with ROE basis point adders for success	Conceptual, details being developed
RIIO	UK	Performance goals for decreases in Totex, stakeholder engagement, 8-year resource and service plans with indexed pricing	First price control in 2013
"r-K"	CA	Suggested approach for awarding 3 - 3.5 percent ROE on cost of DER programs as a replacement for lost profits	Controversial- disagreements over measuring cost of capital
EE	Many states	Can include: Full EE cost recovery, decoupling, and profit incentive on lost opportunities	Lost profit incentive provided in half of states with EE mandates

Example: NY REV

Earnings Adjustment Mechanisms (EAMs) and Earnings Impact Mechanisms (EIMs): monetized performance metrics which NY will use for two years (or more) beginning in 2017 to achieve DER-related goals and to transition towards Market Based Earnings (platform revenues) that will supplement and perhaps replace EIMs and cost of service.

- Four kinds of performance targets:
 - System Efficiency (Peak Reduction) - build electric load that improves load factor; conversion to EVs, geothermal heat pumps, and other efficient and beneficial uses
 - Energy Efficiency - achieve and exceed developed targets
 - DER Interconnection - developed based on satisfaction surveys of DER providers regarding utilities' progress in timely and cost-effective interconnection approaches and approvals
 - Clean Energy Standard - staff initiating stakeholder process to develop EAMs related to GHG reductions
- Utilities are responsible for proposing performance metrics and appropriate rewards (ROE sweeteners for success)
 - To date, program is mostly conceptual; tangible proposals pending

Issues and Insights Surrounding Bridge Incentives

- **Several important questions need to be resolved for incentivizing greater use of DERs:**
 - How should penetration or performance targets be set?
 - What metrics of success to monitor?
 - How rich should the incentives be?
 - For efficient pursuit of DERs
 - For offset to utility disincentives
 - How can experience in the EAM phase be used to learn about long run UoF market design ?
 - Should there be a “sunsetting” of the process (when is a bridge no longer needed)?
- **What are potential unintended consequences?**
 - Distortions in other, not incentivized activities
 - Cost shifting to non-participants
 - Premature or uneconomic development of emerging technology

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