

# PERFORMANCE-BASED REGULATION: HELPING TO ENABLE A CUSTOMER- CENTRIC FUTURE

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**NARUC**  
National Association of Regulatory  
Utility Commissioners

**NAVIGANT**

# TABLE OF CONTENTS

<b>SECTION 1</b>	Key Takeaways
<b>SECTION 2</b>	Evidence of a Changing Electric Industry
<b>SECTION 3</b>	Summary of Alternative Regulation Mechanisms
<b>SECTION 4</b>	A Comprehensive Framework: PBR 2.0



## KEY TAKEAWAYS

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## Overview

- We see a structural shift in the traditional utility business model
- In response to changing dynamics, a range of alternative regulatory mechanisms have built up over time
- A growing number of states are considering or actively pursuing changes to the current regulatory framework
- Utilities should proactively engage with and help shape an evolution to the existing regulatory framework or risk having others dictate it for them

## Leading Examples

Navigant carried out a thorough investigation into current and developing regulatory frameworks to uncover emerging best practices. Selected models for success include:

- New York
  - *Multi-year Rate Plans + Earnings Adjustment Mechanisms (PIMs) + Platform Service Revenues*
- Illinois
  - *Performance-based Formula Rate Plan*
- Hawaii (*in progress*)
  - *Multi-year Rate Plan + Performance Mechanisms (Metrics/Scorecards/PIMs) + Shared Savings*
- Vermont
  - *Regulatory Sandbox: Pilot Framework that permits utility flexibility for 18 months without prior approval*

**The very nature of the regulatory framework and process needs to change**



## EVIDENCE OF A CHANGING ELECTRIC INDUSTRY

## EVIDENCE OF A CHANGING ELECTRIC INDUSTRY

# THE ENERGY CLOUD: TOWARD A CLEAN, DECENTRALIZED, AND INTELLIGENT GRID

**PAST:** Traditional Power Grid  
Central, One-Way Power System



Market  
Demand

Technology  
Innovation

Policy &  
Regulation

**TODAY:** The Energy Cloud  
Distributed, Cleaner, Two-Way Power Flows



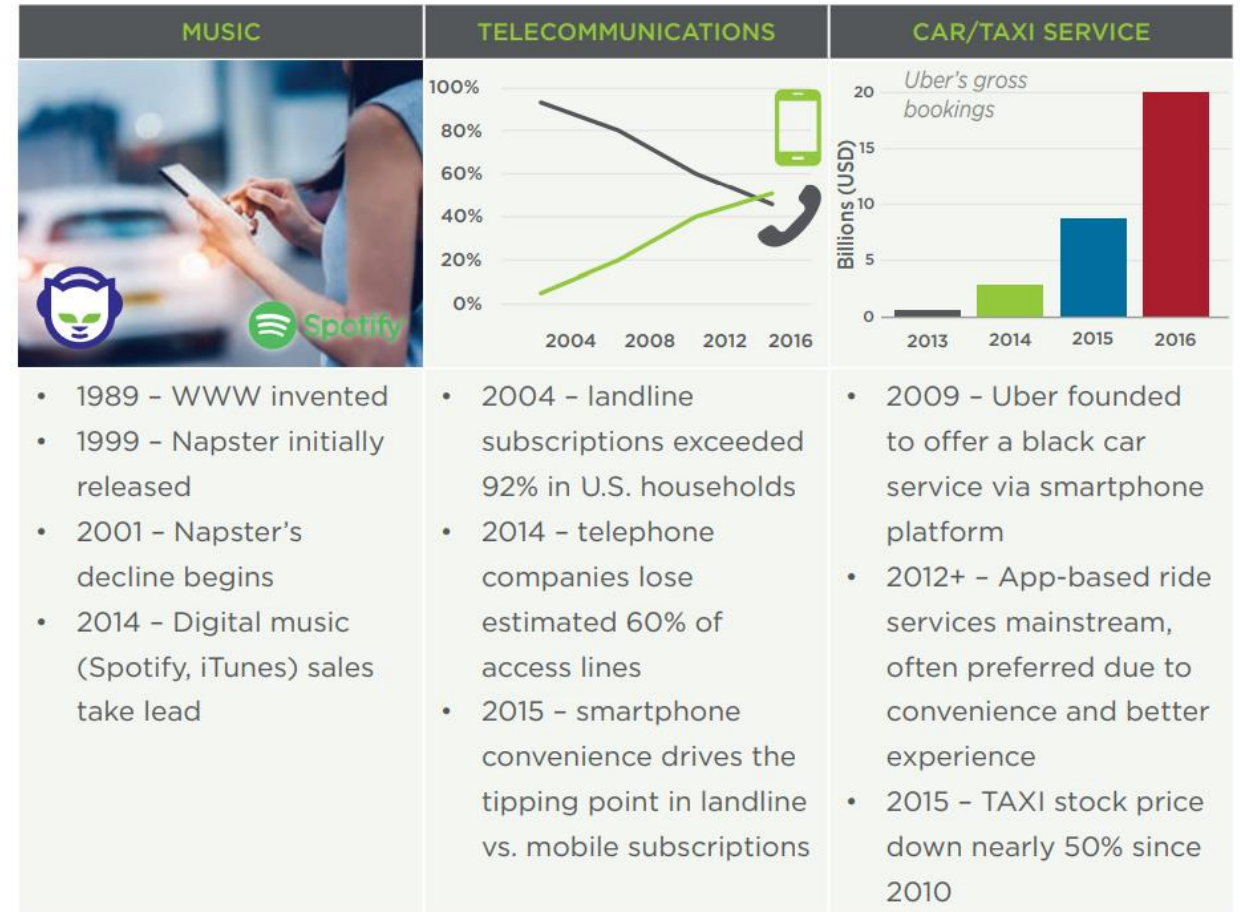
Source: Navigant



# EVIDENCE OF A CHANGING ELECTRIC INDUSTRY

## THE RISE OF CUSTOMER-CENTRIC THINKING

- Customers are coming to expect higher levels of service from their utilities.
- This comes in part from a shift in consumer expectations in other industries, whether it be media services (Netflix), lodging (AirBnB), or retail (Amazon).
- The common thread in these industry shifts is digital disruption, with customer-centric thinking winning out in the end.
- These revolutionary business models have used technological innovation at the offerings – and platform – level to provide seamless, fast, and convenient service to customers.



(Source: Navigant Research)



## SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS



# SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS

## OVERVIEW OF CORE ALTERNATIVE MECHANISMS

Category	Description	Mechanism	Benefits
<b>Revenue Adjustment Mechanisms</b>	Focus on how target revenues are determined, collected, and adjusted, and shifting regulation to incentivize cost control and rewards utility performance.	Revenue Decoupling	Reduces utility interest in growing energy sales, removing barriers to energy efficiency and customer-sited generation
		Multiyear Rate Plans	Improves cost containment and reduces administrative burden
		Formula Rates	Ensures the authorized rate of return on agreed-upon investments
		Earning Sharing Mechanisms	Safeguards that performance-based mechanisms will not harm a utility's financial integrity, nor negatively impact customers
<b>Performance Mechanisms</b>	Provide incentives to reach performance targets aligned with policy and customer priorities	Reported Metrics	Informs the development of revenue adjustment mechanisms; tracks the efficacy of regulatory mechanisms
		Scorecards	Encourages better achievement of regulatory outcomes with clear visuals
		Performance Incentive Mechanisms	Financially motivates utilities to improve performance toward established outcomes
<b>Other Regulatory Mechanisms</b>	Help level the field across resource classifications and provide utilities opportunity to earn revenues from procurement of third-party solutions.	Shared Savings	Incentivizes utilities to seek more cost-effective solutions without compromising shareholder interests
		Regulatory Sandbox	Create regulatory space to test innovative products and services
		CAPEX/OPEX Equalization	Financially rewards a utility for pursuing the least-cost, highest value solution

Source: Navigant

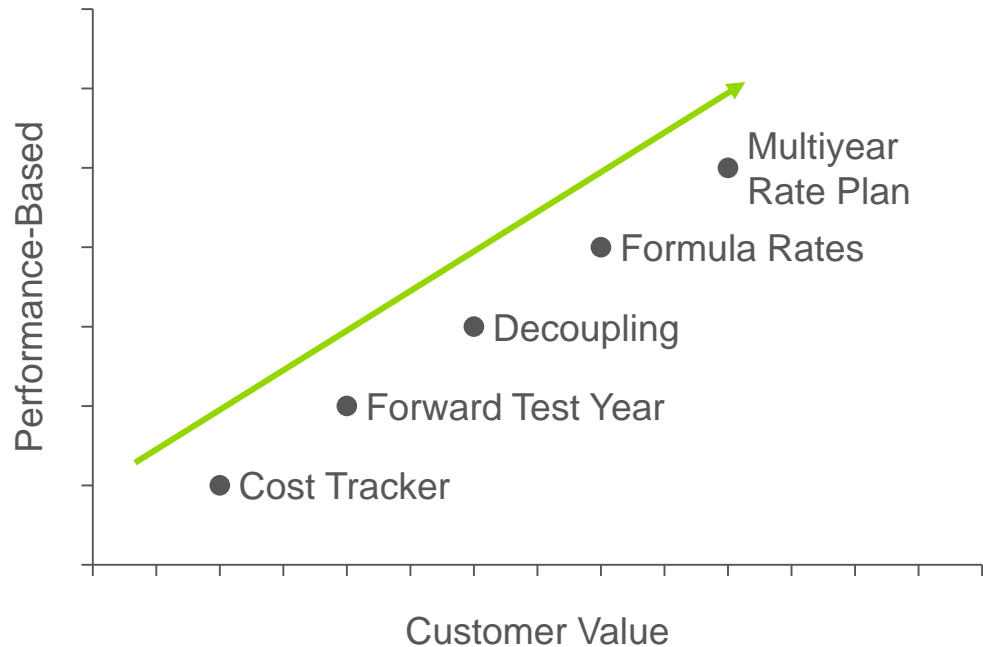
## SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS

### REVENUE ADJUSTMENT MECHANISMS

**Revenue adjustment mechanisms, which are increasingly adopted in the U.S., can be used to transition a utility towards a performance-based and customer value-centric regulatory model.**

**Revenue adjustment mechanisms** focus on how a utilities' target revenues are determined, collected and adjusted over time, and include policy tools that shift regulation away from a backward-looking focus on costs and sales to a more forward-looking approach that incentivizes cost control and rewards utility performance.

**Characterization of Revenue Adjustment Mechanisms**

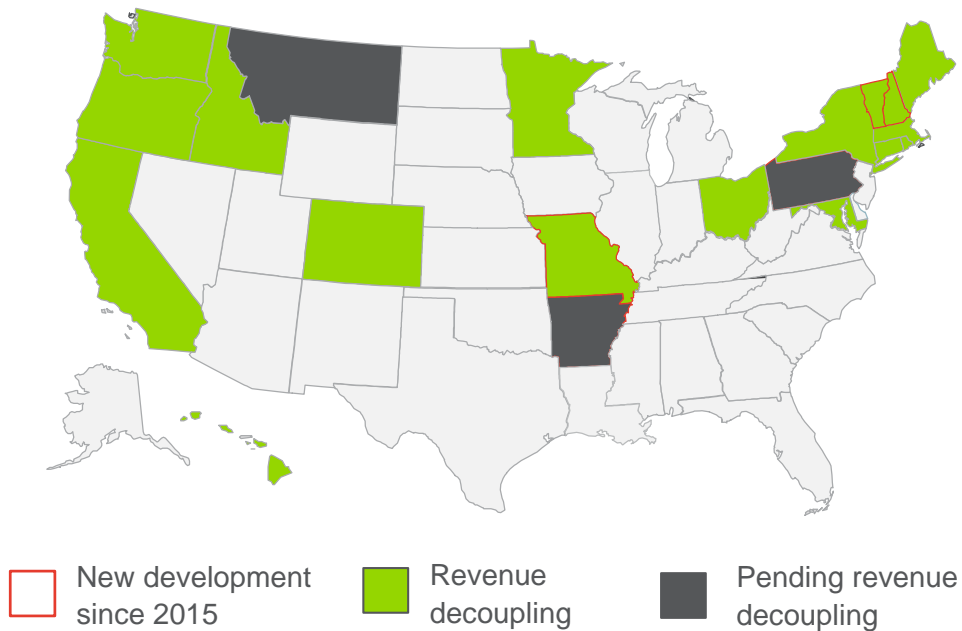


## SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS

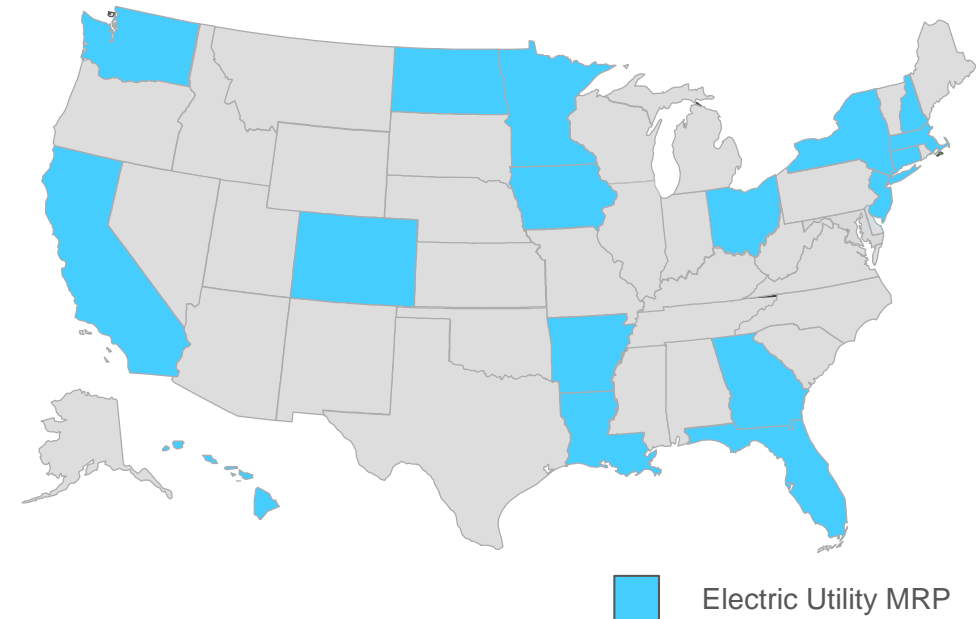
### REVENUE ADJUSTMENT MECHANISMS

**Revenue adjustment mechanisms, which are increasingly adopted in the U.S., can be used to transition a utility towards a performance-based and customer value-centric regulatory model.**

## U.S. Revenue Decoupling Precedents



## U.S. Multi-Year Rate Plan Precedents



## SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS

### PERFORMANCE MECHANISMS

**Performance mechanisms provide incentives for the utility to reach performance targets through the public display of metrics or benchmarking, or through financial reward for achieving certain performance.**

**Performance mechanisms** can be used to assess diverse areas of the utility's performance, such as safety and reliability, customer satisfaction, and adoption of energy efficiency programs. The reported metrics and scorecards can also be used as building blocks for a utility, helping it to build metric tracking capabilities and gather historic and peer-compared performance trends to ultimately pursue a PIM.



## SUMMARY OF ALTERNATIVE REGULATORY MECHANISMS

### OTHER REGULATORY MECHANISMS

#### Regulatory Sandbox: Creating Space for Innovation



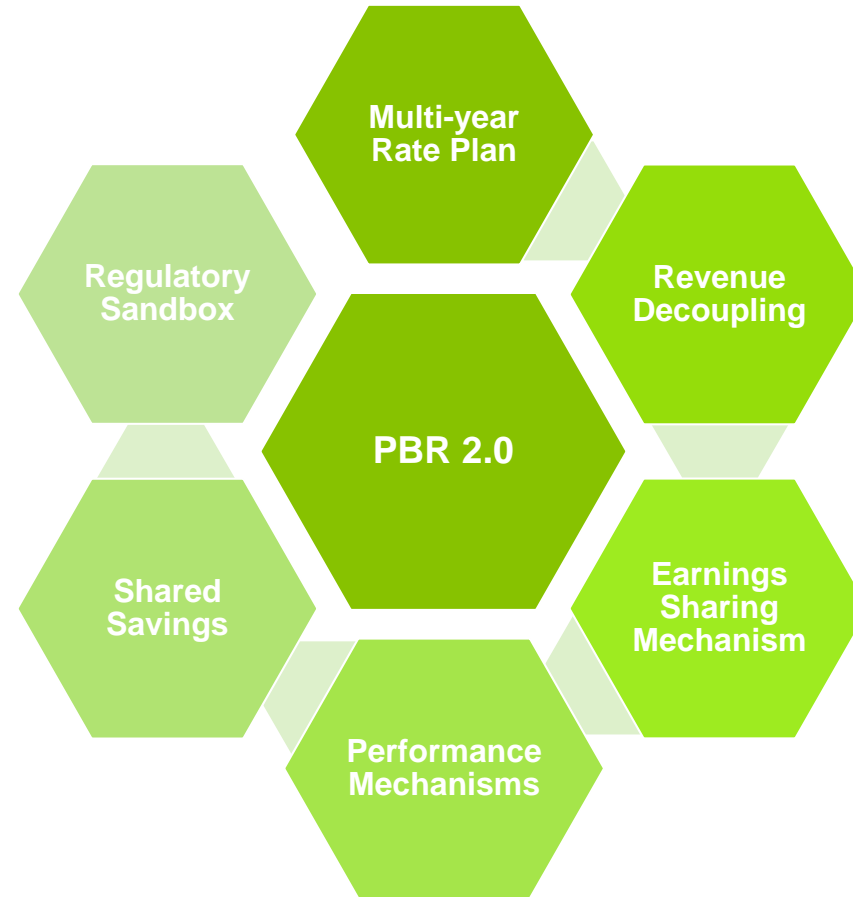


## A COMPREHENSIVE FRAMEWORK: PBR 2.0



## CORE ELEMENTS OF AN ADVANCED PBR FRAMEWORK

To create sufficient space for innovation, enhance customer satisfaction, lower overall costs, and facilitate the transition to a platform utility model, policymakers should explore an advanced PBR framework that includes critical, core elements.



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## APPENDIX

A COMPREHENSIVE FRAMEWORK: PBR 2.0

# CORE ELEMENTS OF AN ADVANCED PBR FRAMEWORK

Revenue Adjustment Mechanisms	
Multi-Year Rate Plan (MRP) and Indexed Revenue Cap	3-5-Year Control Period with Externally-Indexed Revenue Cap allowing interim adjustments to both capital and operating expenditures pursuant to a revenue cap to an externally indexed formula (e.g., inflation less productivity). A 3-5-year plan period will help to incentivize cost containment over the duration and will free up resources previously spent on annual rate cases to focus on grid modernization and adding customer value.
Revenue Decoupling	Revenue decoupling mechanism to true up revenues to an annual revenue target, which ensures the utility receives the target revenue, regardless of increases or decreases in energy sales. Revenue decoupling smooths out volatility that would occur over a 3-5-year MRP period and removes an incentive barrier to energy efficiency and DER adoption.
Earnings Sharing Mechanism (ESM)	Symmetrical ESM that provides both “upside” and “downside” sharing of earnings between the utility and customers when earnings fall outside a Commission-approved range. A symmetrical ESM can act as a “safety valve” around earnings, allowing for a meaningful percentage of overall earnings to be tied to performance-based incentives while protecting the utility’s financial integrity and the customers’ interests.

A COMPREHENSIVE FRAMEWORK: PBR 2.0

# CORE ELEMENTS OF AN ADVANCED PBR FRAMEWORK

Performance Mechanisms	
Performance Incentive Mechanisms (PIMs)	Set of PIMs designed to help drive achievement of the following regulatory and policy outcomes: Reliability; Interconnection Experience; Customer Engagement; and DER Asset Effectiveness.
Scorecards	Scorecards with targeted performance levels to track progress against emergent regulatory outcomes, such as: Interconnection Experience; Customer Engagement; Cost Control; and GHG Reduction.
Reported Metrics	Portfolio of Reported Metrics to highlight activities under the following regulatory outcomes such as: Affordability; Customer Equity; Electrification of Transportation; and Resilience.

A COMPREHENSIVE FRAMEWORK: PBR 2.0

CORE ELEMENTS OF AN ADVANCED PBR FRAMEWORK

Other Regulatory Mechanisms	
CAPEX/OPEX Equalization	One or more shared savings mechanisms to incentivize the cost-effective pursuit of non-wires solutions and revise regulatory provisions so utilities can earn a rate of return on third-party service solutions.
Innovation	Regulatory sandbox to create space for the development of innovative products and services and experiment with subscription pricing to facilitate enhanced customer access to new products and services.
Platform Service Revenues	Examine how platform service revenues can be incorporated into the regulatory framework to diversify utility revenues in the near-term and facilitate a utility platform business model in the longer term.



# The Evolving Utility

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## YESTERDAY

- **SAFE**
- **RELIABLE**
- **AFFORDABLE**

## TODAY

- **SAFE & SECURE**
- **RELIABLE & RESILIENT**
- **AFFORDABLE**
- **CUSTOMER-FOCUSED**
- **INCREASINGLY CLEAN**

## TOMORROW

- **SAFE & SECURE**
- **RELIABLE & RESILIENT**
- **AFFORDABLE & EQUITABLE**
- **CUSTOMER-FOCUSED & INTERACTIVE**
- **CARBON FREE**
- **SERVICE PLATFORM**
- **PLATFORM FOR OTHER INFRASTRUCTURE**

# Evolving Regulatory Model -- PBR

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PBR = Regulatory mechanisms that create stronger connection between a utility's performance and its earnings

Utility motivations for PBR:

- Better aligns financial goals with performance
- Less frequent rate cases
- Rate predictability
- Aids in cost control
- Rewards improved customer satisfaction, system reliability, system resiliency
- Allows for greater innovation, collaboration, and embracing new business models

# Different Goals Align with Different Tools

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GOAL	MECHANISM
COST CONTROL	MRP
TARGETTED PERFORMANCE OR POLICY GOAL	PIM
EXPEDITED INVESTMENT	Other Constructs (trackers, riders)

Multi-year Rate Plans (MRP) -- Rates are set contingent upon a rate case moratorium and adjustments escalate rates or revenue between rate cases to address cost increases

Performance incentive mechanisms (PIMs) -- assignment of financial rewards and/or penalties to narrowly specified areas of utility performance or policy outcomes

# PIM Principles

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- Based on measures the utility can reasonably influence
- Defined with clear, transparent and easily understood language and formulae
- Designed with outcomes that are quantifiable and easily measured
- Balanced financial rewards and penalties that reflect acceptable levels of risk and reward
- Should not penalize a utility for being an early adopter

# PIM Types

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- **Traditional PIMs** provide incentives to maintain service quality (largely via penalties)
- **Emerging PIMs** provide incentives to push forward new initiatives (largely via rewards)
  - **Programmatic PIMs** are based on achievement of targets within specific programs and would be contingent on approval of those programs
  - **Outcome Based PIMs** are based on achievement of targets, but not tied to any specific programs

# What Else?

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Utilities are increasingly considering new ways to address grid needs reliably and affordably

These new solutions may involve new asset ownership and business models:

- Utility owned and just used for grid needs
- Utility owned and optimized to benefit of customers
- Utility owned and leased to 3<sup>rd</sup> party for additional uses
- Third party owned and leased to utility for grid needs

New ownership and business models may require new utility recovery/revenue mechanisms:

- Earning on contracts/services
- Earning on savings



# **Recent Experience with Performance Incentives in Rhode Island**

**Abigail Anthony, Commissioner  
Rhode Island Public Utilities Commission  
November 2019**

# Example: “EV CO2”

- Proposal to award a shareholder incentive for achieving GHG reductions from electric vehicle adoption.

**CO2: Consumer Electric Vehicles – Targets (incremental avoided metric tons of CO2) and Maximum Earnings Opportunity**

	2019	2020	2021
Minimum	553	761	1,060
Target	1,013	1,396	1,944
Maximum	1,474	2,030	2,828
Earnings at Maximum (\$1,000)	\$276	\$367	\$497

- Issues
  - Existing utility incentives
  - Action-based vs. outcome-based
  - Payout based on qualitative benefits

# Proposed Principles for PIMs

**Principle 1:** A performance incentive can be considered when the utility lacks an incentive (or has a disincentive) to better align utility performance with the public interest and there is evidence of underperformance or evidence that improved performance will deliver incremental benefits.

Available at:

<http://www.ripuc.org/eventsactions/docket/4943page.html>

**Principle 2:** Incentives should be designed to enable a comparison of the cost of achieving the target to the potential quantifiable and cash benefits.

**Principle 3:** Incentives should be designed to maximize customers' share of total quantifiable, verifiable net benefits. Consideration will be given to the inherent risks and fairness of allocation of both cash and non-cash system, customer, and societal benefits.

**Principle 4:** An incentive should offer the utility no more than necessary to align utility performance with the public interest.



**Principle 5:** The utility should be offered the same incentive for the same benefit. No action should be rewarded more than an alternative action that produces the same benefit.



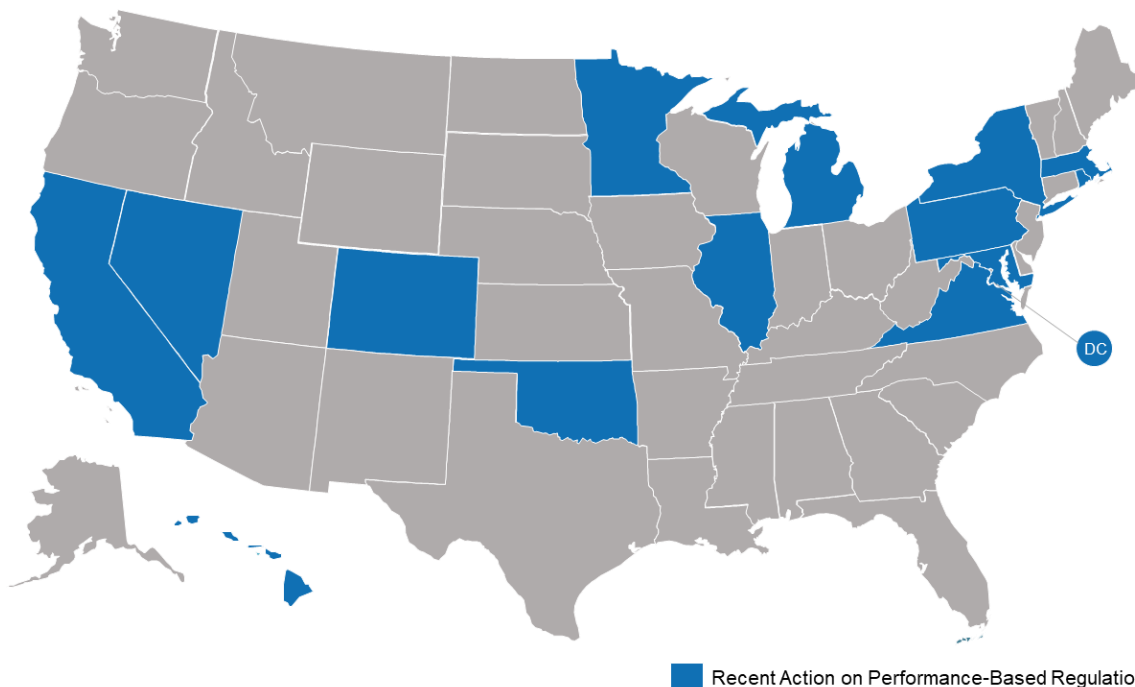
## Performance-Based Regulation: Recent State and Utility Activity

Eighteen states have considered various types of utility business model reforms so far in 2019, with at least 14 states taking significant actions related to performance-based regulation. Performance-based regulation is a potential alternative to traditional cost of service regulation, providing utilities with financial incentives for achieving certain metrics, and sometimes penalties for failing to achieve these metrics.

**Table 1: Major State Activities Related to Performance-Based Regulation**

State	Bill/Docket	Summary of Activity
CO	S.B. 236	S.B. 236, enacted in May 2019, requires the Public Service Commission to conduct an investigation of financial performance-based incentives and performance-based metric tracking for electric utilities. A general determination is to be made on whether a shift to performance-based incentives for regulated electric utilities would provide net benefits to the state.
HI	Docket No. 2018-0088	Pursuant to S.B. 2939 of 2018, the Public Utilities Commission opened a proceeding in April 2018 to investigate issues associated with performance-based regulation for the HECO companies. Phase 1 evaluated the current regulatory framework and identify which incentive mechanisms may not be functioning as intended, and identified specific areas that should be targeted for improvement. In Phase 2, the Commission is working collaboratively with stakeholders to refine elements of the existing regulatory framework, develop incentive mechanisms to better address specific objectives, and explore alternative regulatory frameworks. The Commission issued a decision in May 2019, adopting three guiding principles: a customer-centric approach, administrative efficiency, and utility financial integrity. The decision also establishes three goals and 12 prioritized outcomes.
MD	Case No. 9618	On August 9, 2019, the Maryland Public Service Commission issued an order on alternative forms of rate regulation and established a working group process. The Commission directed the Public Utility Law Division to lead a working group of interested parties to develop a detailed implementation report regarding multi-year rate plans. After the working group submits its report on multi-year rate plans, it is to consider issues related to performance-based regulation.
MN	Docket No. 17-401	Minnesota statutes provide that the Commission may require a utility operating under a multiyear rate plan to provide a set of reasonable performance measures and incentives that are quantifiable, verifiable, and consistent with state energy policies. The Commission opened a proceeding in September 2017 to reach an understanding of the combination of metrics and incentives that could appropriately align utility and ratepayer interests. The Commission identified several metrics and directed Xcel Energy to work collaboratively with interested parties to develop proposed specific methods to calculate each of the identified metrics. A notice filed by the Commission in September 2019 set a deadline of October 31, 2019 for Xcel to file the proposed final metrics with a description of the corresponding methodology.
NV	Docket No. 19-06008	Pursuant to S.B. 300 of 2019, the Public Utilities Commission of Nevada (PUCN) is adopting procedures for utilities to apply for approval of alternative ratemaking plans. An alternative ratemaking plan may include performance-based rates.
RI	Docket No. 4943	In March 2019, Commissioner Anthony prepared a memorandum describing principles for performance incentive mechanisms. The Commissioner proposed five principles, which parties provided comments on in May 2019.

**Figure 1: Performance-Based Regulation Activity, January to November 2019**



Utilities in a number of states have proposed specific performance incentive mechanisms, including those based on customer satisfaction, reliability, interconnection timeframes, and distributed energy resource deployment. Several utilities have performance incentive mechanisms currently in place related to energy efficiency and demand response.

**Table 2: Recent Utility Performance Incentive Mechanisms (PIMs) under Consideration**

State	Utility	Performance Incentive Mechanism(s)	Decision
DC	Pepco	SAIDI, SAIFI, DER interconnection review timeframes	Pending
MA	National Grid	Peak reduction, electric vehicle adoption, electric vehicle supply equipment cost containment, customer ease (a score reflecting how easy it is for customers to interact and do business with the utility)	Not Approved
OK	Public Service Company of Oklahoma	SAIDI, grid modernization time and cost containment, customer satisfaction, economic development	Not Approved (PIMs not included in settlement)
RI	National Grid	Annual MW capacity savings, installed energy storage capacity, avoided tons of CO <sub>2</sub> from electric vehicles, avoided tons of CO <sub>2</sub> from electric heat, light-duty government and commercial fleet electrification, activated low-income and multi-unit electric vehicle charging sites, DG interconnection time	Only approved PIM is for annual MW capacity savings