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Performance-Based Regulation (PBR) and Performance Metrics

Washington Utilities and Transportation Commission

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About RAP

- RAP is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

- RAP provides technical and policy support at the federal, state and regional levels, advising utility and air regulators and their staffs, legislators, governors, other officials, and national organizations.

Agenda

- Review of Traditional Cost-Of-Service Regulation
- Basics of Performance Based Regulation
- Designing Performance Metrics
- Examples from Other States

1 Brief Review of Traditional Cost-of-Service Regulation

Basics on Cost-of-Service

- Sets prices for electric service that are sufficient to recover the total costs for providing service, plus a reasonable return on investment
- Regulators concerned with ‘just and reasonable’ rates
- Focused on inputs rather than outputs or outcomes
- Sets prices, not revenues

"All regulation is incentive regulation"

– Peter Bradford

"Incentives" of traditional regulation include:

- Build and own assets to grow rate base
- Increase volume of sales and electricity usage to enhance profits
- Prevent actions that reduce sales
- Focus on inputs, not outputs
- Avoid disallowances (results in conservatism)
- Institutional inertia

2 Performance Based Regulation

Performance-Based Regulation (PBR) is…

- A regulatory framework that connects achievement of specified objectives to utility financial performance

- A PBR framework typically includes a collection of revenue adjustment mechanisms (i.e. decoupling) and performance incentive mechanisms (i.e., financial rewards or penalties based on performance).

- PBR can also include performance metrics that are simply reported, as well as metrics with targets or goals.

PBR May Help Overcome Bad Outcomes

- Good things that are not profitable for the utility that don't get done (e.g. non-wires solutions, public interest social goals, aggregated DERs)
- Bad things that are profitable to the utility that should be prevented (e.g. gold-plating physical assets)
- Bad incentives not easily seen (e.g. deferring expenses like tree trimming, customer care, underserved communities)

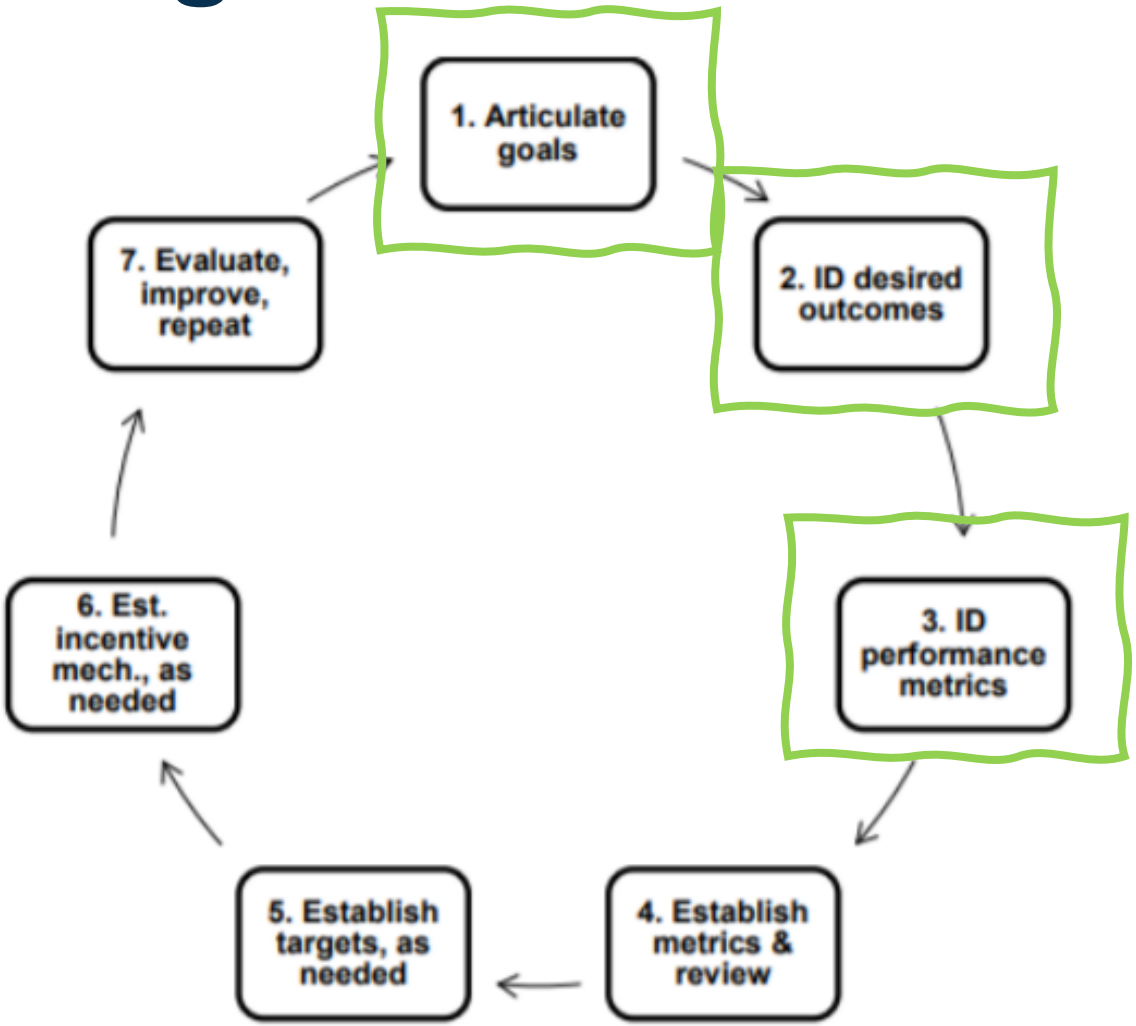
Typical components of PBR

- Multi-year determination/formula for allowed revenue – *for cost containment and rate stability*
- Decoupling - *to address the throughput incentive*
- Earnings sharing mechanisms – *sharing risks/rewards*
- Performance metrics linked to outcomes, perhaps with financial incentives – *motivate good things, discourage bad activities*

Not all of these will be present in every PBR approach

3 Designing Performance Metrics

PBR Design Considerations



Graphic: MN PBR docket
https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BF0E82E68-0000-CF1F-93DB-4CE874187020%7D&documentTitle=20191-148970-01

Set Guiding Goals

Examples:

- Affordability
- Reliability

Photo: Heidi Sandstrom

Understand Current Incentives

- How does the status quo create incentives or disincentives for achieving your guiding goals?
- How do new SB 5295 requirements interact with existing mechanisms?
- What aspects of utility performance are currently tracked and reported? What is missing?

Develop Measurable Performance Outcomes

Examples:

- Declining customer bills
- Reduced customer outages

Create Metrics

Examples:

- Average monthly bills for residential customers
- Frequency & duration of customer outages (SAIDI/SAIFI/CAIDI/MAIFI)

Photo: Christian Kaindl

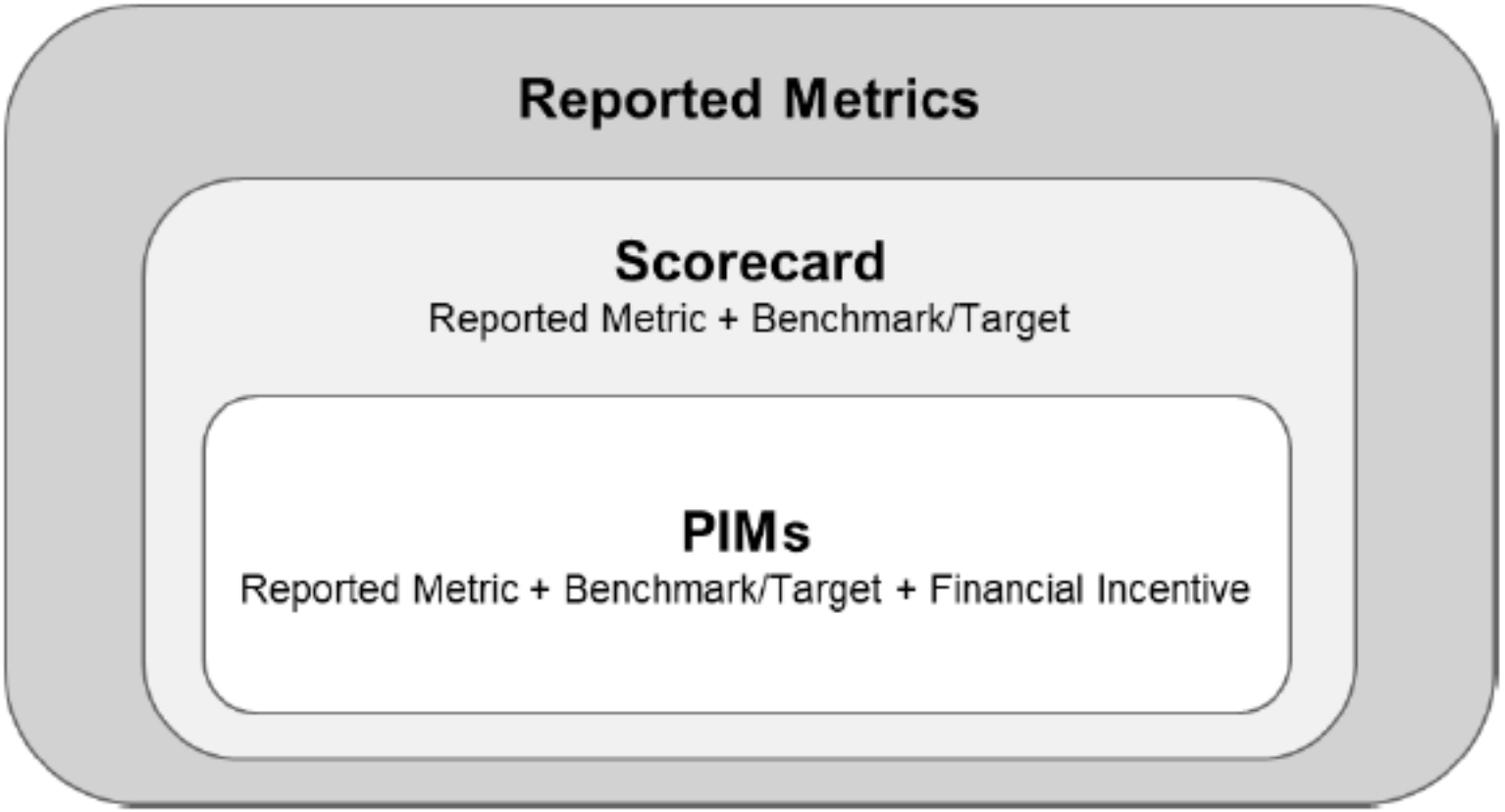
Establish Performance Targets

Example:

- 2% reduction in average monthly residential bills
- 5% improvement in SAIFI from baseline value

Photo: Shirley Niv Marton

Performance Tracking Options



Source: Hawaii PBR Phase 1 Staff Proposal, page 32 (Figure 6)

Metric Design Considerations

- Tracks outputs or outcomes, not inputs
- Avoid overlap with legal or regulatory requirements that are already sufficiently reported
- Clear, measurable and meaningful metrics
- Evaluated regularly
- Focus on outcomes subject to utility influence
- Data are accessible and transparent
- Not all metrics need/should be associated with financial mechanisms

PBR Design Considerations

Graphic: MN PBR docket
https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7BF0E82E68-0000-CF1F-93DB-4CE874187020%7D&documentTitle=20191-148970-01

4 Examples of Frameworks and Metrics from HI and IL

Hawaii PBR Goals and Outcomes

The following guiding principles will inform the development of the PBR framework:

1. **Customer-centric approach**, including immediate "day 1" savings for customers when the new regulations takes effect;
2. **Administrative efficiency** to reduce regulatory burdens to the utility and stakeholders;
3. **Utility financial integrity** to maintain the utility's financial health, including access to low-cost capital

Regulatory Goal	Regulatory Outcome	
Enhance Customer Experience	Traditional	Affordability
		Reliability
	Emergent	Interconnection Experience
		Customer Engagement
Improve Utility Performance	Traditional	Cost Control
	Emergent	DER Asset Effectiveness
		Grid Investment Efficiency
Advance Societal Outcomes	Traditional	Capital Formation
		Customer Equity
	Emergent	GHG Reduction
		Electrification of Transportation
		Resilience

Hawaii Public Utilities Commission

Source: HI PUC, D&O 36326

Hawaii Performance Metrics*

- Reliability - SAIDI, SAIFI
- Affordability
  - Number of customers in payment arrangements
  - Number of disconnections by class
- Interconnection Experience
  - Time and cost to connect for DER systems <100kW
  - Customer satisfaction
  - Truck roll-related / responsiveness times for DER and non-DER customers
- Customer engagement
  - Customer participation in utility programs
- DER Asset Effectiveness / Grid Services
  - Percent and Total MW of DER capable of providing grid services
  - MW of energy curtailed from DERs
  - Percent of total customers with advanced meters enabled to support TOU rates and DER programs
- Customer Equity
  - Realized energy savings or load reductions for LMI customers
  - Participation in utility programs
- GHG Reduction
  - Companies' annual compliance with the RPS (incentive based on over-achievement)
- Resilience
  - Total amount of time that critical loads are without power in a year
  - Total number of employees completing National Incident Management System Incident Command System certifications
  - Total number of employees that have attended emergency response training, annually

*Some (but not all) have PIMs associated

Illinois Climate and Equitable Jobs Act (CEJA)– PBR objectives themes

- Specific focus on:
  - Service reliability and safety,
  - Decarbonization of utility systems;
  - Addressing burdens of environmental justice and low-income communities

Illinois CEJA – Tracking Metrics (no incentives)

- Minimize GHG emissions by accelerating electrification
- Enhance grid flexibility
- Ensure rates reflect cost savings due to grid modernization and DERs
- Metrics designed to create and sustain jobs
- Maximize and prioritize the allocation of grid planning benefits for EJ communities

Illinois CEJA – Performance Incentive Metrics

- Achieve affordable customer delivery service costs
- distributed energy resource (“DER”) interconnection,
- customer service,
- peak load reductions,
- supplier diversity,
- Improve power quality, reliability and resiliency, particularly in EJ communities

IL Stakeholder Suggested Metrics for Affordable Customer Delivery Service Costs

Suggested metrics:

- Energy burden by demography
- Reduction in total arrearages by zip code/census tract level

Key issues

- Energy burden metrics likely require tracking demographic and income data
- Data granularity is critical for evaluating affordability – and tricky

Key Takeaways

- Defining goals and objectives will help inform the rest of your PBR process
- Choosing and designing metrics can be challenging – focus on connecting to your goals and desired outcomes
- Tracking metrics can help establish a baseline, which can lead to performance incentives in the future
- Ask what could go wrong or what could be an unintended consequence
- Build in systems and processes for evaluation and improvement

RAP Resources

- Next-Generation Performance-Based Regulation: Volume 1 (Introduction—Global Lessons for Success)
- Next-Generation Performance-Based Regulation: Volume 2 (Primer—Essential Elements of Design and Implementation)
- Next-Generation Performance-Based Regulation: Volume 3 (Innovative Examples from Around the World)
- Performance Incentives for Cost-Effective Distribution System Investments
- Protecting Customers from Utility Information System and Technology Failures
- Metrics to Measure the Effectiveness of Electric Vehicle Grid Integration

Q&A