Performance-Based Regulation (PBR) and Performance Metrics

Washington Utilities and Transportation Commission

Docket U-210590 Workshop 1

Camille Kadoch, Senior Associate  Jessica Shipley, Senior Associate  Rick Weston, Principal
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

1. Articulate goals
2. ID desired outcomes
3. ID performance metrics
4. Establish metrics & review
5. Establish targets, as needed
6. Est. incentive mech., as needed
7. Evaluate, improve, repeat

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
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)
Establish Performance Targets

Example:
- 2% reduction in average monthly residential bills
- 5% improvement in SAIFI from baseline value
Performance Tracking Options

Reported Metrics

Scorecard
Reported Metric + Benchmark/Target

PIMs
Reported Metric + Benchmark/Target + Financial Incentive

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
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 take 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

<table>
<thead>
<tr>
<th>Regulatory Goal</th>
<th>Regulatory Outcome</th>
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</thead>
<tbody>
<tr>
<td>Enhance Customer Experience</td>
<td>Traditional: Affordability, Reliability</td>
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<tr>
<td></td>
<td>Emergent: Interconnection Experience, Customer Engagement</td>
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<tr>
<td>Improve Utility Performance</td>
<td>Traditional: Cost Control</td>
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<tr>
<td></td>
<td>Emergent: DER Asset Effectiveness, Grid Investment Efficiency</td>
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<tr>
<td>Advance Societal Outcomes</td>
<td>Traditional: Capital Formation, Customer Equity</td>
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<tr>
<td></td>
<td>Emergent: GHG Reduction, Electrification of Transportation, Resilience</td>
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</tbody>
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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