Xcel Energy Performance Metrics
Stakeholder Engagement Process

MN PUC Docket 17-401

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AGENDA

- Welcome
- Overview on Utility Performance Metrics
- Overview of PUC Order and Stakeholder Engagement Process
- Q&A

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Welcome

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Overview on Utility Performance Metrics

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Overview of Performance Metrics

Minnesota Stakeholder Process Webinar

February 5, 2019

Tim Woolf
Synapse Energy Economics

Outline

- The role of performance incentive mechanisms (PIMs) in the context of the existing regulatory setting.
- Four discrete components of PIMs.
  - Performance areas, metrics, targets, incentives
- Performance metrics in Minnesota
  - Performance areas
  - Principles
- Different types of PIMs: system, program, actions
- Examples from other states: RI, NY, HI
- Potential PIM pitfalls.

PIMs in the Context of Multi-Year Rate Plans

Regulatory Element	Cost of Service Regulation	Multi-Year Rate Plans
Frequency of rate cases	As needed.	Pre-determined, fixed period.
Revenue adjustments between rate cases	No adjustments to base rates.	Attrition relief mechanisms.
Performance Incentive Mechanisms	Typically focused on safety, reliability, and customer service	• Traditionally focused on areas that may experience service degradation due to cost reductions • Increasingly designed to create incentives to achieve a broad set of desired outcomes.

The Regulatory Context and PIMs

- Each regulatory model has its own embedded incentives. PIMs can address/offset these incentives.
  - Incentive to increase sales
  - Incentive to build rate base
  - Lack of incentive to innovate
  - Lack of incentive to pursue regulatory goals
- Are there regulatory goals that are not fully addressed in the current system?
  - New customer services for the evolving grid
  - Achievement of environmental goals
- PIMs can help to articulate goals and provide the right incentives

Performance Incentive Mechanisms: Overview

Objective	• Articulate specific regulatory goals • Track performance • Incentivize improvements
Key Components	• Regulatory goals – identify performance areas and outcomes • Metrics – detailed information regarding utility performance • Targets – requirement to achieve specific goals • Financial incentives – based on performance relative to targets
Optional Components	• Benchmarking • Scorecards • Public reporting

PIMs: Four discrete components

Performance Areas	• To identify areas of focused utility attention. • Based on state regulatory goals and desired outcomes. • It is best to articulate these first.
Metrics	• To provide information regarding utility performance. • Specific to performance areas and regulatory goals.
Targets	• To provide guidance on how utility should perform. • Build off of metrics, typically a subset. • May be preferable to monitor metrics before setting.
Financial Incentives	• To provide financial incentive for utility performance. • Provide the greatest opportunities and risks. • Build off targets, typically a subset. • May be preferable to monitor targets before setting.

PIMs: Minnesota

Performance Areas	• Affordability • Reliability • Customer service • Environmental • Alignment of generation and peak
Metrics	• Tied to policy goals • Defined clearly • Easily measured, interpreted, and verified • Sufficiently objective • Complement and inform performance • Reporting requirements
Targets	• To be developed later
Financial Incentives	• To be developed later

Three different types of PIMs

- Outcome-based
  - Regulators define the desired outcome but do not specify the specific programs or actions to achieve them
  - Example: reduce peak demand
  - Gives utility the incentive to be creative and innovative
- Program-based
  - Incentives for a specific program that is overseen by regulators and stakeholders.
  - Example: EE shareholder incentives.
  - Gives utility very specific regulatory direction.
- Action-based
  - Specific utility actions to help lead to a desired outcome.
  - Might not include specific benefits or targets (e.g., MW, MWh, or GHG)
  - Typically used to help facilitate a transformation.
  - Example: provide customers and third parties with end-use data

Example: Rhode Island

Type	PIM	Description
System Efficiency	Transmission Peak	Reduce transmission peaks relative to forecast
	FCM Peak	Reduce annual FCM peak relative to forecast
Distributed Energy Resources	Demand Response – Res.	Increase MW enrollment in cost-effective DR
	Demand Response - C&I	Increase MW enrollment in cost-effective DR
	Electric Heat Initiative	Increase MW of cost-effective electric heat
	Electric Vehicle Initiative	Reduce GHG emissions relative to baseline
	Behind-the-Meter Storage	Install MW of cost-effective storage
	Utility-Scale Storage	Install MW of cost-effective storage
	Non-Wires Alternatives	Procure cost-effective NWA from third-parties
PST Support	Low Income: Participation	Increase LI participation in DER initiatives
	Low Income: Enrollment	Increase customer enrollment in LI rate A60
	Customer Information	Provide key data to customers and third-parties
	Peak Demand Forecasting	Improve and expand current forecasting practices

Example: New York (1 of 2)

- System efficiency:
  - System utilization (load factor, T&D utilization, fuel diversity)
  - Peak reduction (transmission system peak reduction)
  - DER penetration (DG, DR, EE, as a % of total load)
  - DER utilization (MWh from incremental DERs)
- Customer engagement:
  - TOU rate efficiency
  - Customer satisfaction (complaints, response times, etc.)
  - Customer enhancement (affordability, engagement, etc.)
  - Affordability (low-income participation, terminations, arrearages, etc.)
- Interconnection:
  - Timely and cost-effective interconnection

Example: New York (2 of 2)

- Clean Energy Standard:
  - Carbon reduction
  - Conversion of fossil-fuel end-uses
  - Beneficial electrification
- Energy Efficiency:
  - Incremental savings
  - LED streetlight conversion
  - Residential energy intensity
  - Commercial energy intensity
- Market development:
  - Distributed system platform (DSP)
  - DSP market development
  - DSP market-based revenues

Example: Hawaii (1 of 2)

Outcome	Existing Metrics	New Metrics
Affordability	▪ ¢/kWh, by class ▪ Contributing cost components to customer rates	▪ Average annual bill, by class ▪ Average annual bill as % of income, by class ▪ Average annual bill as % of income for LMI customers ▪ Bill stability: percent change in average annual bill, by class ▪ Percent of res. customers in arrearage plans ▪ Number of disconnections, by month. ▪ Ratio of customers in arrearage plans to customer disconnections, by month
Reliability & Resilience & Cybersecurity	▪ SAIDI ▪ SAIFI ▪ CAIDI ▪ MAIFI ▪ Response time	▪ SAIDI & SAIFI, by worst performing circuit ▪ Resilience: SAIDI, SAIFI, CAIDI, ▪ MW of fast ramping resources ▪ MW of capacity and percent of customers served by microgrids ▪ Percent of critical customers served by microgrids ▪ Percent of critical customers experiencing an outage during a major event ▪ Duration of outages of critical customers ▪ Participation in joint utility-community resilience planning ▪ Cybersecurity: number of attempted breaches ▪ Cybersecurity: percent of breaches successful ▪ Cybersecurity: adoption of EPRIs metrics ▪ Cybersecurity: adherence to NERC standards ▪ Cybersecurity: information sharing with other entities/participation in joint planning

Example: Hawaii (2 of 2)

Interconnection Experience	none	▪ Time in interconnection queue ▪ Results of developer satisfaction survey
Customer Equity & Engagement	▪ Number of NEM program participants ▪ Capacity of all NEM resources (MW) ▪ Total energy (kWh) exported by NEM resources, excluding feed-in tariff and standard interconnection	▪ EE: % participation, by class ▪ DR: % participation, by class ▪ PV: % customers with installation, by class ▪ Community solar: % participation, by class ▪ Other DG: % customers with installation, by class ▪ Storage: % installations, by class ▪ TOU: % participation, by class ▪ TOU: % of all customers participating ▪ Percent of LMI households participating in EE, DR, PV, DG, Storage, or TOU ▪ Customer access to usage hourly or sub-hourly consumption data ▪ Third-party service access to customer data. ▪ Variety, quality, and accessibility of customer data available to customers/third-parties. ▪ Consumer education*
Customer Satisfaction	▪ Customer survey ▪ Complaints ▪ % calls within 30 secs. ▪ Billing accuracy ▪ Meters read ▪ Appointments met ▪ Order intervals	▪ Results of independent surveys, e.g., J.D. Power

PIM Pitfalls

- Undue rewards (or penalties)
  - Utility paid for something it would do anyway
- Customer costs outweigh customer benefits
  - Utility financial incentive exceeds customer benefits
- Unintended consequences
  - Utility focus unduly shifted to earn incentive
- Regulatory burden
  - Contentious and burdensome review process
- Uncertainty
  - Provide incorrect signals
- Gaming and manipulation
  - Utility incentive to rig the PIM

Almost all of these are driven by financial incentives

- Performance metrics are a very low-cost, low-risk approach

Contact Information

Synapse Energy Economics is a research and consulting firm specializing in technical analyses of energy, economic, and environmental topics. Since 1996 Synapse been a leader in providing rigorous analysis of the electric power and natural gas sectors for public interest and governmental clients.

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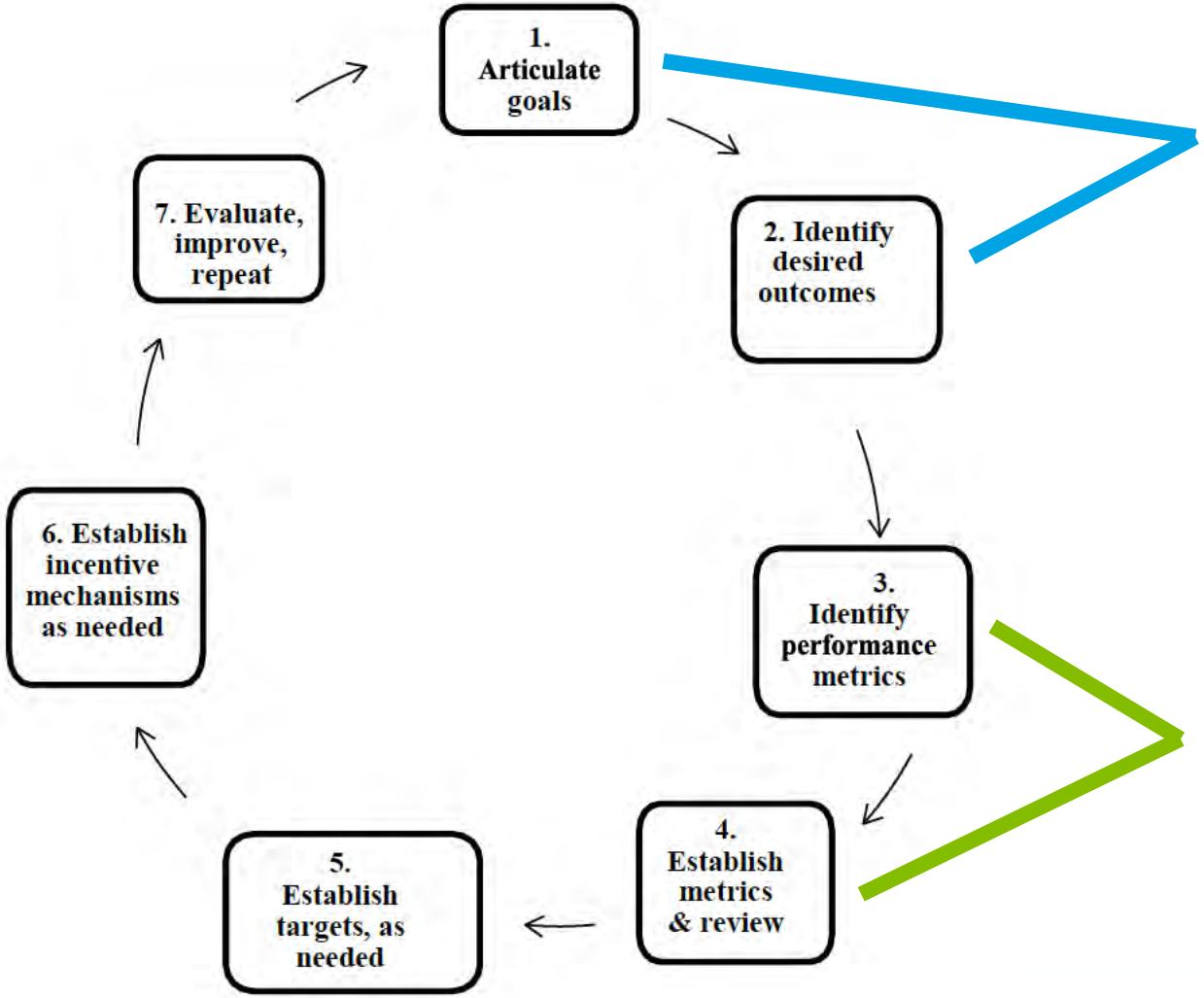
PUC Order
January 8th, 2019

"The Commission hereby adopts the OAG's Performance Incentive Mechanism Process and associated Goals-Outcomes-Metrics hierarchy, with an initial focus on steps 1 through 4."

PIM Process



DONE
Commission Order
January 8th, 2019

TO DO
2019 Stakeholder Process
February-October 2019

Step 1:
Goals of Regulation

The goals in overseeing the rates, investments, and returns made by the investor-owned utilities in Minnesota are to promote the public interest by ensuring

- environmental protection
- adequate, efficient, and reasonable service
- reasonable rates
- the opportunity for regulated entities to receive a fair and reasonable return on their investments

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Step 2: Desired Outcomes

- **Affordability**
- **Reliability,** including both customer and system-wide perspectives
- **Customer service quality,** including satisfaction, engagement and empowerment
- **Environmental performance,** including carbon reductions and beneficial electrification
- **Cost effective alignment of generation and load,** including demand response.

Metric Design Principles

- Tied to the policy goal
- Sufficiently objective and free from external influences
- Clearly defined method of calculation
- Quantifiable using reasonably available data
- Easily interpreted
- Easily verified
- Should complement and inform other methods of evaluating of utility performance

Stakeholder Engagement Process Objectives

1. **Raise the level of education among stakeholders to support a well-informed discussion.**
2. **Identify a draft set of metrics (existing or new) under each of the Commission-established outcomes that…**
   a. Indicate progress on that outcome
   b. Comport with the Commission-established metric design principles
3. **Develop recommendations for calculating, verifying, and reporting on those metrics.**
4. **Identify, clarify, and document key questions, areas of agreement and difference, and areas for further exploration among stakeholders that arose throughout discussions.**

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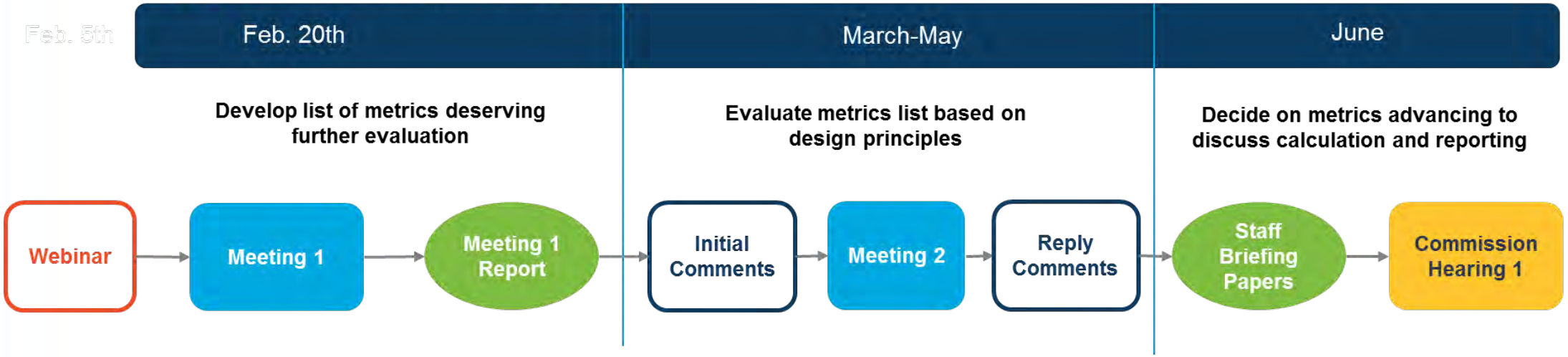
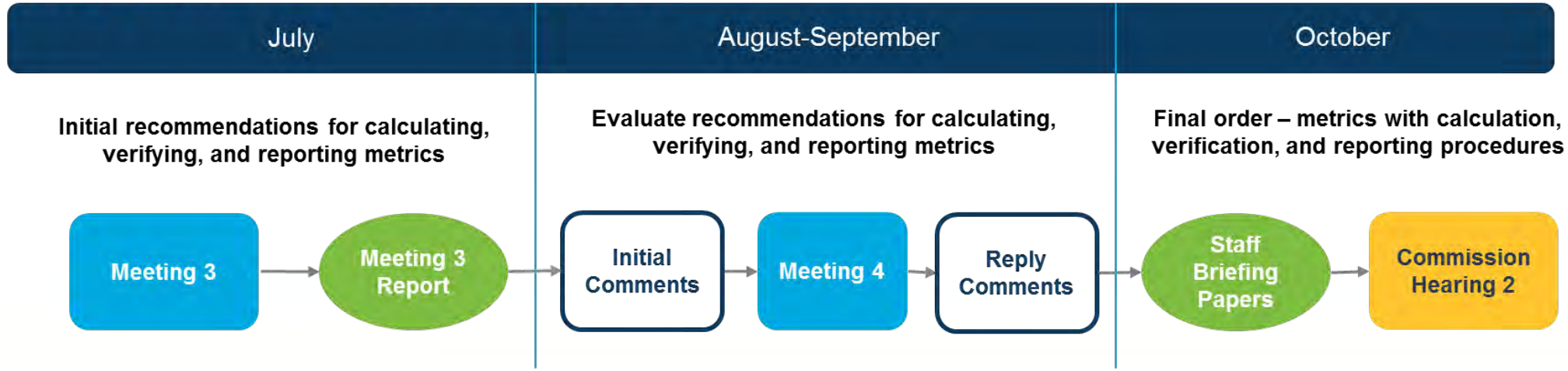
Stakeholder Process

Step 3: Identify Performance Metrics



Step 4: Establish Metric Reporting Process



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February 20th Meeting Objectives

1. **Develop an initial list of metrics under each Outcome, sorted into 4 buckets:**
   A. Metrics stakeholders generally agree SHOULD be used for that outcome
   B. Metrics stakeholders generally agree SHOULD NOT be used for that outcome
   C. Metrics on which stakeholders disagree
   D. Metrics needing more information to be evaluated
2. **Begin to identify how well those metrics comply with the design principles.**
3. **Begin to identify whether metrics can be consolidated**

Next Steps

- **February 20th all-day meeting**
  - Surly Brewing Co. in St. Paul
  - 8:00am - 4:30pm
  - Register online: mnperfmetricsmtg1.eventbrite.com
- **Look out for participant survey**
- **Questions?** Contact Trevor Drake at tdrake@gpisd.net

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Questions

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