

MPSC – Performance Based Regulation Report

Study of Performance Based Regulation

[2016 PA 341 Sec. 6U (2,3)]

Michigan Public Service Commission Staff

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MICHIGAN PUBLIC SERVICE COMMISSION

Evolution of the Electric Power Industry Creating New Regulatory Challenges

- **Smart Grid**
 - opportunities to manage power outages, improve service restoration, reduce power theft, implement time-based pricing, expand demand response resources
- **Distributed Generation**
 - creates multi-directional power flows within the distribution grid
 - new opportunities for grid resilience
 - competes with centralized power generation
- **Advanced Energy Storage**
 - changes the real-time operation of the power grid
 - new opportunities to provide ancillary services, manage peak demand, load shift, accommodate variable renewable energy



Photo: C. OBrien

Changes in the structure and operation of the power industry will challenge both cost-of-service and incentive approaches to economic regulation



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Incentive Regulation: Defined

- Regulatory mechanisms that provide regulated firms with economic incentives to :
 - **reduce costs** (*x-efficiency improvements*)
 - provide efficient pricing of regulated services
 - make efficient infrastructure **investments**
 - improve service quality
 - introduce new products and services

Tend to be elusive

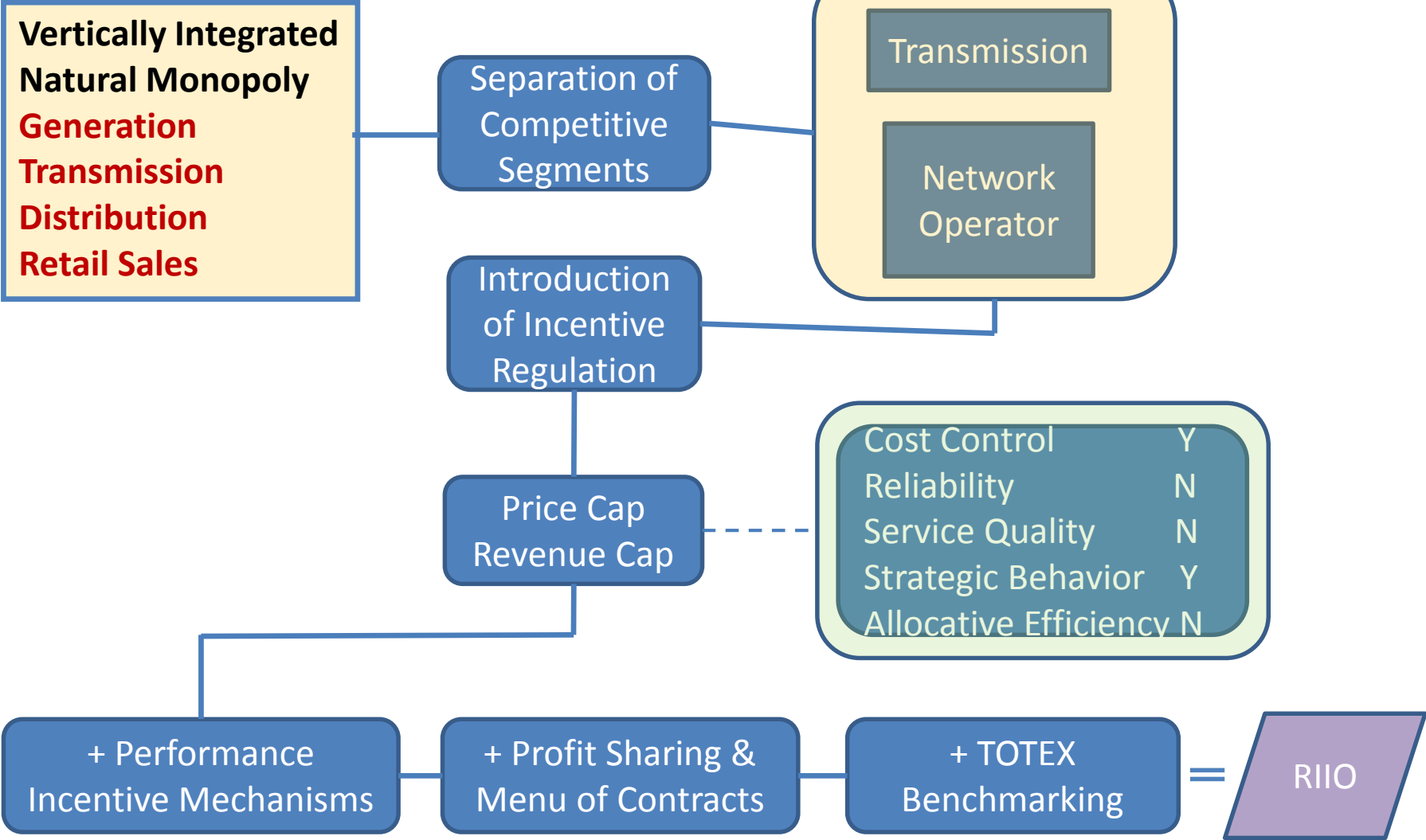


Implementation of Incentive Regulation is More Complex and Challenging Than May First Meet the Eye.

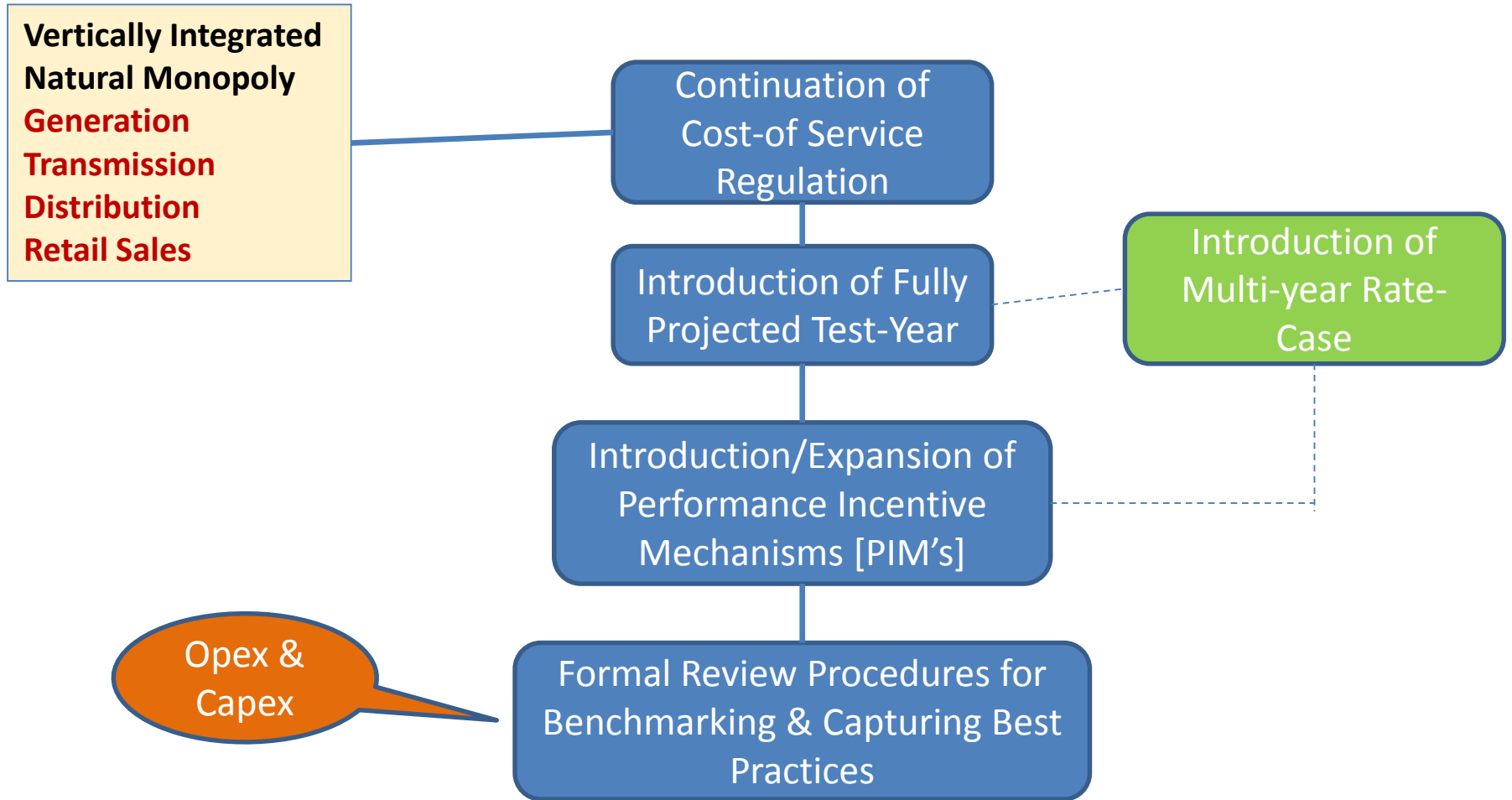
- Implementation of incentive regulation mechanisms depends on **information gathering, auditing, accounting and engineering** functions that are commonly associated with traditional cost-of-service regulation.
- Important to develop sound approaches to the treatment of capital expenditures, benchmarks for operating costs, resets (“ratchets”) of prices, and service quality attributes
- Must develop methods to deter gaming of incentive regulation mechanisms



The Road to RIIO



Alternate Evolutionary Path of PBR



MPSC Staff Observations

- **Michigan has a long history of cost-plus ratemaking** and the current rate-setting process is well developed
- **The UK's RIIO model of PBR is innovative and highly aggressive** in attempting to extract optimal x-efficiencies and output-based objectives
- **The RIIO PBR model is applied to a utility industry that has been restructured** to exclude competitive segments, and Michigan is likely to continue with a vertically-integrated regulated utility structure [significantly complicates RIIO type PBR]
- **Full implementation of a RIIO type PBR** in Michigan would entail significant cost and human resources
- **Current direction of the electric utility industry** in Michigan will continue toward further grid automation, expanding renewable energy, distributed generation, and ultimately a high level of de-carbonization
- **Output based PBR mechanism such as Performance Incentive Mechanisms (PIM's)** may be considered as a means of achieving policy objectives at most reasonable cost to ratepayers



Building Blocks To PBR For Consideration

Existing Programs

- Energy Waste Recovery Program
- Renewable Portfolio Standard
- Integrated Resource Planning
- Distribution Planning Initiative
- Demand Response & Load Control

New Programs

- Benchmarking & Best Practices Process
- New Performance Incentive Mechanisms
- Expanded Stakeholder Engagement

- System Efficiency PIM's
- System Reliability PIM's
- Service Quality PIM's
- Technology Innovation PIM's
- Environmental & Social Impact PIM's



MPSC Draft Report Outline

- (1) Executive summary
- (2) Introduction to PRB [economic theory/regulatory foundations]
- (3) PBR attributes and structure
- (4) Evolution of incentive regulation mechanisms
- (5) The UK's RPI-X model
- (6) The UK's RIIO model
- (7) Commentary on multi-year rate cases
- (8) Addition of PIM's as an alternative to full replacement of COS regulation
- (9) Survey of key incentive/PBR implementation in the U.S [New York REV & other]
- (10) Major issues facing future regulators in the rate setting process
- (11) Conclusions regarding applicability of PBR in Michigan
- (12) Best direction for future work

