



Maine Public Utilities Commission

Introduction

Hon. Mark Vannoy, Commissioner Maine Public Utilities Commission

March 24, 2014





Maine Public Utilities Commission 1913 - 2013







Maine Public Utilities Commission (MPUC)

- 3 Commissioners
 - Appointed for 6-year terms
- 64 Staff members
 - Career positions
 - Technical analysts
 - Financial analysts
 - Attorneys
 - Safety inspectors
 - Support personnel







Operational Independence

- Term appointments of Commissioners
- Operating Budget funded through transparent assessment formula
- Commissioners and Staff may not own financial interest in regulated utilities
- Commission decisions subject to Judicial appeal





MPUC functions as a Court

- Commissioners = judges
- Utilities & customers = litigants
- Rules of Evidence
- Cross-Examination
- Open Deliberative Session
- Publication of Final Orders







How are Policy Issues Addressed ?

- In the course of litigated cases
- Informal Inquiry
- Formal Investigation
- Rulemaking
- Advocacy before regional and federal Bodies
- Testimony before legislative energy, utilities, and technology committee
- In-depth reports prepared at request of legislature







Retail Consumer Protection Role

- Consumer Assistance Call Center
 - 9,500 consumer calls per year
 - Most are resolved through informal mediation
 - Binding written decisions on 650 consumer complaints
- Complaints:
 - Billing disputes and disconnection of service
 - Service quality troubles
 - Payment plans
- Analysis of call center activity helps identify trends in utility performance







Public Safety Role

- Emergency Services Communications Bureau ("911")
 - Equipment procurement
 - Systems services
 - Training for Emergency Medical, Police, Fire dispatchers
- Gas Safety
 - Compliance inspections of natural gas transmission and distribution facilities and certain propane systems
 - Enforcement through fines and mandatory training
- Dig Safe
 - Facility identification protocols prior to excavation activity







Industry Sectors Regulated by MPUC

- Water Utilities
- Telephone
- Gas Distribution
- Electric Transmission and Distribution (T&D)
- and, very rarely, Passenger Ferries



Water

- 130 consumer-owned water districts
 - Governed by locally elected officials
 - Minimal review of rates by MPUC
- 20 investor-owned utilities
 - MPUC conducts traditional Cost of Service rate cases
- A major issue confronting small rural water districts is the cost of replacing aging infrastructure in an era of a declining customer base
- Federal Drinking Water Standards have required upgrades to water treatment processes and development of new water sources









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National Association of Regulatory Utility Commissioners

Telephone

- 23 "incumbent" utilities
 - MPUC regulated the price of only traditional, basic, local wireline service
- MPUC implemented 1966 Federal policy of unbundling of wireline telephone "distribution" plant with mixed results in terms of sustainable, facilities-based local service competition
- More successful has been the promotion of intermodal competition through "hands-off" regulatory approach in the cellular, cable, and internet phone market
- 1.3 million people in Maine
- 1.2 million cellphone subscribers



Regulatory Utility





FROM THE AMERICAN PEOPLE

USA

- 4 Utilities
 - 37,000 customers
- Substantial recent construction by two new distribution competitors
 - 80 miles steel pipeline
 - 70 miles plastic mains
 - 185 Commission inspections
- Replacement of 65 miles of old cast iron and bare steel pipe by Maine's oldest (150-year) urban distribution company









Electric Transmission and Distribution (T&D)

- 2 investor-owned utilities
 - Central Maine Power
 - 3,534,811,000 KWh
 - Bangor Hydro Electric
 - 779,720,000 KWh
- 10 consumer-owned utilities
 - Kennebunk Light & Power (largest)
 - 40,919,603, KWH
 - Monhegan Island (smallest)
 - 107,735 KWh









Maine's Electric Industry















Generation Capacity within Maine's Borders (total nameplate capacity = 4,800 MW)







Steam Turbine Facilities (1811 MW)

- 630 MW
 - 1 generator, built 1978
- 50 120 MW
 - 6 generators
- 20 50 MW
 - 18 generators
- 1-20 MW
 - 23 generators
- Oldest (residual fuel oil) was built 1950
- Newest (natural gas) was built 2012







Combined Cycle Plants (1389 MW)

- Capacity range 177-195 MW
 - 7 generators
- Capacity 95 MW
 - 1 generator
- Facilities were built in 2000 and 2001







Hydro Electric Generation (733 MW)

- 9 facilities; 25-35 MW
- 8 facilities; 10-20 MW
- 22 facilities; 1-10 MW
- 22 facilities; < 1 MW







Wind (431 MW)

- Capacity range 60-66 MW
 3 projects
- Capacity range 20-57 MW
 6 projects
- Capacity 4.5 MW
 - 2 projects

Projects completed 2008-2012









Combustion Gas Turbine Facilities (399)

- Capacity 187 MW
 - 1 generator; built 2001
- Capacity 55 MW
 - 3 generators; built 1999
- Capacity 18 MW
 - 2 generators; built 1970
- Capacity 10 MW
 - 1 generator; built 2002
- Capacity 4 MW
 - 1 generator; built 2006









New England Region Generation 120,887 thousand MWh









Maine connected to New England Regional Grid (ISO-NE)







Maine's History of Regulation of Electricity Sector

- 100 years of MPUC oversight
- Historically, market consisted solely of vertically integrated firms supplying generation, transmission and distribution on a bundled basis.
- The MPUC regulated these firms as "natural" monopolies with the goal of establishing output and prices that a hypothetical competitive market would supply.







MPUC regulation as substitute for competition Goal = avoid excessive "economic" profit



- An "economic profit" is a profit that exceeds what is necessary to attract capital investment.
- "Normal" profit is achieved where regulated price = marginal cost; at output quantity Q 2
- Q 2 is the "socially" efficient output.





Revenue Requirement: a tool to approximate competition

Revenue Requirement = Expenses + Return

Return = Rate Base * Rate of Return

Rate of Return = Weighted Average Cost of Capital

Weighted Average Cost of Capital = [$D/(D+E) * r_d$] + [$E/(D+E) * r_e$]

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D = value of debt
E = value of equity
rd = cost of debt = weighted average cost of outstanding debt
re = cost of equity = Return on Equity
Return on Equity = application of one of several approaches of comparing investor-expected returns for firms with similar risk profiles
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Underlying principle of Revenue Requirement

"From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends for stock.By that standard the return to that equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital"





History of Competition in Electric Generation

- 1970's dramatic rise in oil prices as a result of oil embargoes by the Organization of Petroleum Exporting Countries (OPEC)
- Increased oil prices most effected those electric utilities that relied on older, oil-fired generating plants
- Dramatic disparity in electricity prices paid by customers served by differing utilities
- U.S. Government reacted with legislation the Public Utilities Regulatory Policy Act (PURPA)





Public Utilities Regulatory Policy Act (PURPA)

- Diversity in source of fuel used for generation
- Required utilities to purchase electricity from new entrants in the generation sector, such as cogeneration, solar, hydro, wind, biomass, known as Qualifying Facilities (QFs)
- QF's exempted from traditional revenue requirement regulation
- Utility would not be required to purchase electricity from a QF when the cost of the QF contract would exceed the cost that the utility would incur by generating that same electricity itself or purchasing it from a non-QF source ("Avoided Cost")







Two significant results of PURPA

- The "avoided cost" mechanism for establishing the price term for QF purchase obligations
 - difficult to administer and often resulted in sub-optimal long term costs
- QF purchase obligations
 - "jump-started" growth of independent energy generation sector
- Advanced generation technologies
 - generation is not a "natural" monopoly industry.
- "Economic Profit" earned by utilities through their transmission
 - New focus of regulatory reform.





Open Access Transmission to Promote Competition in Wholesale Electric Supply Market

- Despite proliferation of independent power producers, utilities exerted monopoly power over access to their transmission facilities.
- In 1998 the Federal Energy Regulatory Commission (FERC), in Order 888, required that utilities provide non-discriminatory access to their transmission networks
 - Open access non-discriminatory tariffs for transmission service
 - Creation of same-time transmission information system available to all users of transmission system
 - Required functional separation of utility's transmission and generation marketing activities (but not divestiture)
 - Encouraged creation of regional, Independent System Operators (ISOs)





MPUC Implements Utility Divestiture of Generation (1995)

- Generation is not a natural monopoly
- Distribution economies of scale = monopoly
- "Electric Restructuring" in Maine
 - Plan developed jointly by Maine Legislature and MPUC
 - Divestiture by utilities of generation assets
 - Unbundling of bills for generation sales and distribution charges
 - Recovery through distribution rates of utilities' stranded costs associated with pre-existing generation contracts
 - Last resort ("Standard Offer") service requisitioned by MPUC in market transactions





All Energy Issues Require MPUC "Dispute Resolution"

- Process must be public
 - Not enough that a decision is "correct."
 - Must be seen by the public as result of open and fair process
- Decisions must be transparent
 - Clear and accurate statement of basis for decision and process leading to the decision
- Decisions must be timely
 - Especially when participants are seeking to enter market
- Decisions must be consistent
 - Public confidence that parties are treated fairly
 - Ensures investors and other market participants that rules will not change once they have made their investments