

# Where Did My Monopoly Go?

CAMPUT

May 13, 2015

Jeffrey Church

Department of Economics and School of Public Policy

University of Calgary



# Overview of Remarks

- Where did your monopoly originate?
- Rationale for regulatory and industry restructuring
  - Why increased reliance on markets?
- Regulatory Reform in Network Industries
- Telecom in Canada
- Electricity in Alberta
- Distributed Generation



# Origination of Monopoly

- Virtues of Competition
  - Productive Efficiency
  - Allocative Efficiency
  - Distributive Efficiency
- State Intervention Requires Market Failure
- State Intervention Result of Political Inefficiency



# Market Failure

- Economies of Size
  - Natural Monopoly
- Trade off Allocative and Productive Efficiency
  - Minimize costs, single firm
  - Maximizes market power and allocative inefficiency
  - Competition poor governance alternative
    - Cost inefficiency and allocative inefficiency



# Regulate in the Public Interest

- Realize cost efficiency
  - Franchise Monopoly
    - Regulate Entry
- Control market power
  - Regulate Prices



# Contracting Problem

- Long Term Contracts
  - Municipal Authority and Service Provider
- Incomplete Contracts
  - Adjust terms of service as conditions change
    - How adjust price through time?
  - Incentives for investment
    - Sunk Capital and Incentive for Hold Up
    - Manage regulatory risk



# Optimal Governance

- Regulatory Institutions
  - Minimize governance costs
  - Replace long term contracts
  - Administered contract (equals cost of service regulation) if
    - Many consumers
    - Single provider
    - Sunk Investment
    - Uncertainty



# Understanding Regulatory Institutions and Practice

- Return on and of investment
  - Focus on used and useful
- Service Obligations
  - Availability
  - Reliability
- Pricing inefficient and (mostly) irrelevant
  - Inelastic demands
  - Revenue requirement attained





# Public Choice

- Legal monopoly power of coercion
- Supplied by politicians
- Demanded by special interest groups
- Regulation creates and transfers rents
  - Creates inefficiencies
  - Creates winners and losers
- Regulatory Capture
  - Firms
  - Consumers with political power



# Regulatory Restructuring: Public Interest

- Technological change enables competition
  - Regulated pricing structure unsustainable
    - Incentives for bypass
      - Cost advantages of new technologies
      - Regulated Rate Structures
- Standard Prescription
  - Unbundling
  - Wholesale regulation
  - Alternative financing and delivery of social programs
  - Stranded Costs



# Unbundling

- Unbundle vertically integrated service
  - Potentially competitive activities
  - Essential facilities
- Regulate Essential Facilities
  - Wholesale regulation replaces retail regulation
  - Smaller monopoly, still monopoly
- Pricing



# Pricing Essential Facilities

- Trade off
  - Lower access prices encourage entry into competitive markets
  - Lower access prices reduce incentives for investment by incumbents
    - Option Value
- Extraordinarily Difficult to Price Access Correctly (efficient)
  - Cost recovery
    - Opportunity cost of the incumbent
      - Efficient Component Pricing Rule
  - Demand elasticity
    - Value of service
  - Inefficient Bypass
    - Not required market power to recovery cost allocation
- Multipart Tariffs



# Telecom

- Technological change and innovation
  - Computer industry
  - Innovation trumps economies of scale and scope
- Unbundling versus Interconnection
  - Interconnection essential
  - Unbundling not successful
    - Intractable pricing problem
    - Incentives for anticompetitive conduct
- Pressure to expand subsidies to the entrants
- Competing networks
  - Two is enough [Inefficient market versus imperfect regulation]
- Wholesale regime
  - Inefficient and unnecessary



# Electricity in Alberta

- Technological Change
  - Efficient and Reliable supply of power
    - Coordination between generation and transmission
    - System Controller and Power Pool
  - Low Cost Generation and Efficient Pricing
    - Competition
- Unbundling
  - Vertical Divestiture Transmission
- Market Power Generation
  - Virtual Divestiture
- Power Pool
  - Efficient dispatch
- Market pricing
  - Limited demand response
  - Uniform Price
    - Location
    - Time
    - Reliability
- Transmission policy



# Distributed Generation

- Policy Objective: Minimize cost of electricity
  - environmental
  - generation
  - transmission
    - investment
    - line losses
    - congestion
  - reliability



# Cost Benefit Framework

## Distributed Generation versus Grid Generation

- Generation
  - Higher cost of generation
  - Higher cost of reliability
    - Less risk pooling
- Transmission
  - Reduce line losses
  - Reduce transmission capacity
  - Instability
- Reliability
  - Lower system wide risk
  - Greater individual risk





# Efficient Adoption

- Incentives aligned
- Regulators have to implement efficient pricing:
  - Transmission
  - Grid Access for Distributed Generation
    - Option value to increase load
    - Ability to sell
  - Price for Injected Power
- Generation
  - Location
  - Reliability
  - Time

