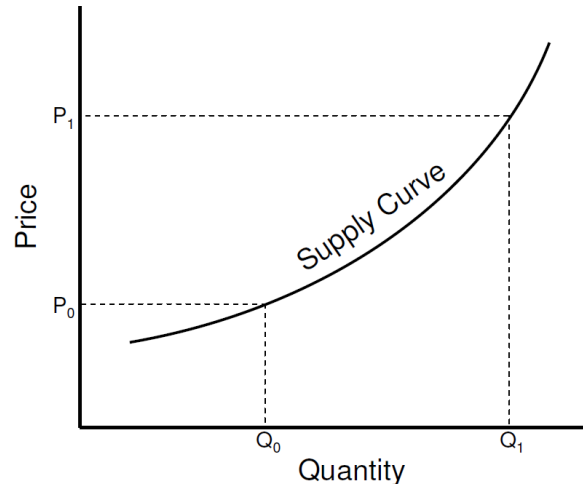
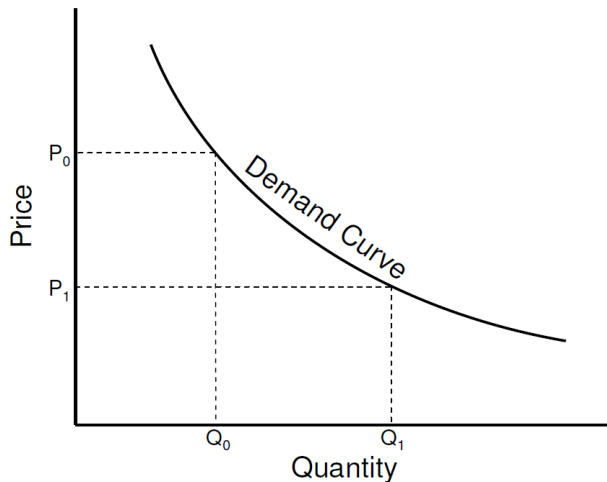
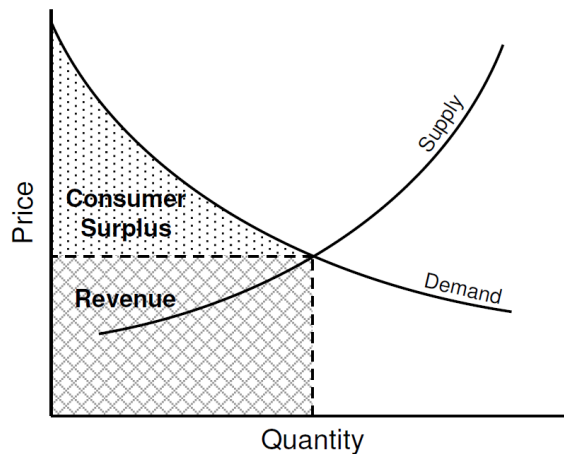


How does monopolistic pricing differ from competitive market pricing? What is the impact of monopolistic pricing on producer surplus and consumer surplus?

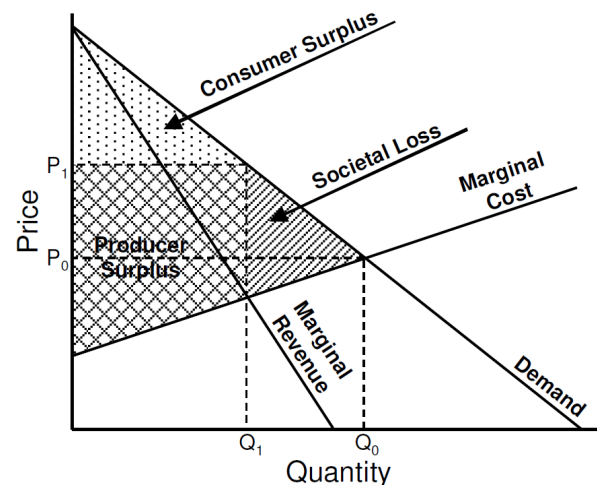
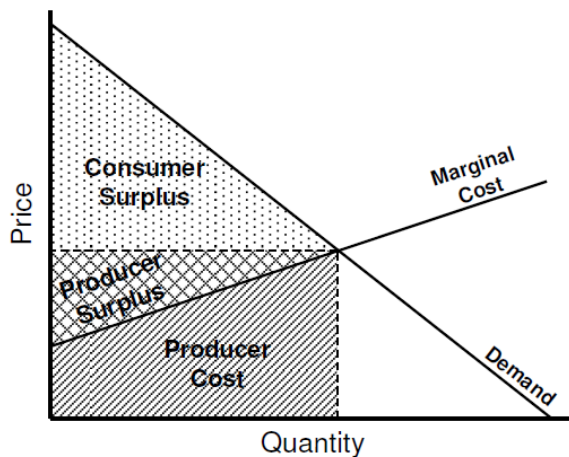
- Pricing in electric markets are determined by a large number of factors specific to each electricity market. When averaged, the changes are most often due to shifts in the balance of supply and demand and in the price of key input fuels.
- The combination of price levels for a service and the corresponding quantity desired by customers is called a demand curve. The combination of price levels for a service and the corresponding quantity supplied by companies is called a supply curve.
- The graphs below represent a typical demand curve and supply curve.



- The intersection of the demand and supply curves occurs at the price (market equilibrium price) where the amount of the service demanded by customers is exactly equal to the amount of the service supplied by companies.
- If prices are increased above the equilibrium point, an excess of supply will force prices to come down. If prices are decreased below the equilibrium point, an excess of demand will force prices to come up.
- An industry is said to be a natural monopoly when an existing monopoly leads to a single provider in the long run and this single provider can supply quantities demanded at costs lower than would otherwise be possible with competition. Regulated services provided by public utilities are typically considered natural monopolies. The price set by these monopolies is called monopolistic pricing.
- Competitive pricing is the process of selecting strategic price points to best take advantage of the electric market relative to competition.
- In a competitive market, competition leads to the market equilibrium price where supply equals demand whereas in unregulated monopolies, the monopoly sets a price at their discretion and the customers would have no choice but to use the services at the set price.
- The difference in the amount that a customer is willing to pay and the amount they actually pay is called consumer surplus. At market equilibrium, total consumer surplus is equal to the area between the demand curve and the market clearing price.
- The graph below shows consumer surplus.



- The incremental cost to produce additional units is called the marginal cost of the service, which an established utility will be incurring to produce electricity. At low quantities, the price a company can charge for its service will exceed its marginal cost
- Producer surplus is the profit made by companies which is equal to total revenue minus producer cost.
- The graph below(L) shows consumer surplus and producer surplus.



- Consider the graph above (R) which compares competitive market pricing to monopolistic pricing.
- Competitive market pricing occurs where the marginal cost curve intersects the demand curve (price of P_0 , quantity of Q_0). Monopolistic pricing occurs where the marginal cost curve intersects the marginal revenue curve (price of P_1 , quantity of Q_1).
- Monopolistic pricing results in higher prices, lower quantities, and a reduction in consumer surplus with an increase in the producer surplus.

From an economic perspective, what should the role of utility regulation strive to achieve?

- Regulation in the utility industry refers to the rules created by government or local bodies which the utility companies must adhere to by law.
- Electric utilities are regulated by state, federal, and local agencies. These agencies govern the prices they charge, the terms of their service to consumers, their budgets and construction plans, and their programs for energy efficiency and other services
- Some of the regulatory authorities that regulate the U.S. electricity sector at federal, state and local level include:
 - ◆ Federal Energy Regulatory Commission (FERC)
 - ◆ Environmental Protection Agency (EPA)
 - ◆ North American Electric Reliability Corporation (NERC)
 - ◆ Nuclear Regulatory Commission (NRC)
 - ◆ Department of Energy (DOE)
- The goals of regulators are to have utility services provided with adequate service levels for the lowest possible rates. They strive to balance the business interests of the utility with the public interests to have an affordable, reliable and financially viable utility.
- Some basic functions a utility regulation performs include:
 - ◆ Determining the revenue requirement
 - ◆ Allocating costs among customer classes
 - ◆ Designing price structures and price levels that will collect the allowed revenues, while providing appropriate price signals to customers
 - ◆ Setting service quality standards and consumer protection requirements
 - ◆ Overseeing the financial responsibilities of the utility, including reviewing and approving utility capital investments and long-term planning
- Regulators use a cost of service approach to determine a fair price for electric service, by which the aggregate costs (including a reasonable return of investment, and a reasonable return on investment) for providing each class of service (residential, commercial, and industrial) are determined. Prices are set to recover those costs, based on the sales volumes for each class.
- It is essential for utility regulation to target the market equilibrium price to ensure a balance between the supply and demand. If prices are increased above the equilibrium point, an excess of supply will force prices to come down. If prices are decreased below the equilibrium point, an excess of demand will force prices to come up.
- Utility regulation needs to put more efforts to simulate market forces and, more ambitiously, to deregulate certain aspects of certain utility industries.
- Market forces are simulated by performance-based ratemaking that financially rewards utilities for good performance and financially penalizes them for bad performance.
- Utility deregulation separates out aspects of a service where competition is practicable, and allows competition to occur.
- Most regulators attempt to set rules and rates in an attempt to capture the efficiencies of a competitive market.

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