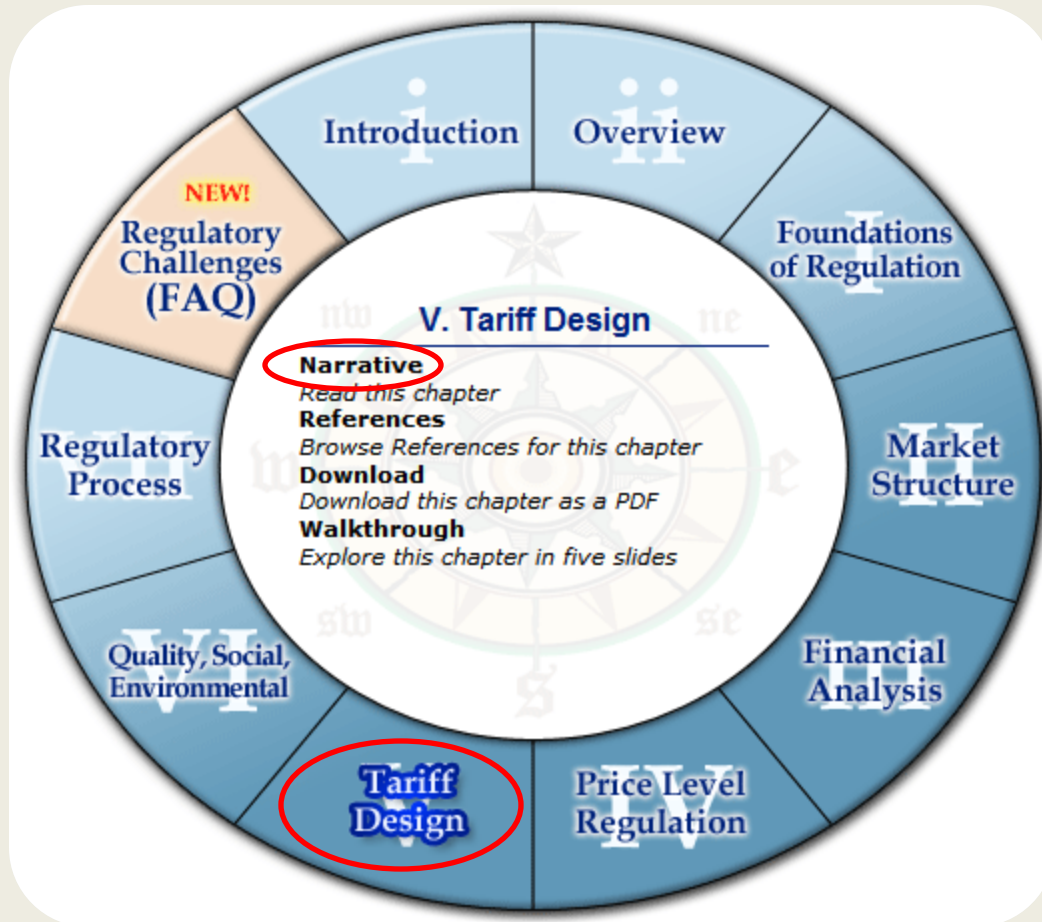


# Tariff Design

The Body of Knowledge on Infrastructure Regulation is divided into seven main sections. Chapter V is dedicated to issues dealing with **Tariff Design**.



Tariff design (or rate design) refers to the relationships among the individual prices the operator charges. This is one topic area where the interests of the operator and the interests of the government often coincide.

This chapter identifies cases where the operator could be allowed to choose its own tariff design (where the price level is still regulated) and situations in which the regulation of tariff design might be desirable (e.g. to protect vulnerable groups).

# How This Section Is Structured

<b>5. Tariff Design</b>
<b>Narrative</b>
Introduction
▶ Economics of Tariff Design
1. Government and Operator Objectives
2. Deviations from Marginal Cost Pricing: Ramsey Pricing
3. Deviations from Marginal Cost Pricing: Multipart Prices
4. Price Discrimination
5. Optional Tariffs
6. Non-linear Prices
7. Peak-load Pricing
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The Economics of Tariff Design section first examines the operator and government objectives, assuming that the operator seeks to maximize profit and the government seeks to maximize welfare and provide affordable service to the poor. Next, Ramsey pricing, a system of pricing that raises individual prices above marginal cost taking into account each service's price elasticity of demand, is explained. Next, multipart pricing is examined. A multi-part tariff is one in which the operator charges separate prices for different elements of the service. This is followed by short sections defining important concepts such as: price discrimination, optional tariffs, non-linear prices, and peak load pricing.

The next section examines pricing and payment scheme issues relating to pricing for the poor, including information on subsidies.

Next, pricing in competitive or partially competitive environments is examined. This section examines topics that are important to keep in mind when competition is introduced such as rebalancing (aligning prices closer to their marginal cost) and deregulation.

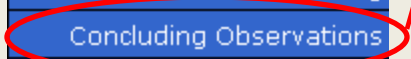
Finally, demand forecasting is addressed. Demand forecasts are used for setting price controls for energy and water and could be used in telecommunications. This section provides a brief description of several methods of demand forecasting that are available.

# Overall Conclusions

<b>5. Tariff Design</b>
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Tariff design is an area where the interests of the government and the interests of the operator may coincide. As a result, the government can effectively deregulate tariff design in many instances.

The Chapter includes material on price discrimination, multi-part price structures, peak-load pricing and other rate design topics. In addition, the Chapter surveys pricing for the poor and in partially competitive environments and underscores the importance of demand forecasting.



# References

The principal resource featured in the BoKIR is the list of (and access to) references that is provided under each section. The literature includes decisions and publications by regulatory agencies and other governmental bodies; policy advisories by think tanks, consultants, donor agencies, etc.; and research by academics, consultants, and other experts.

In the Tariff Design section, references are organized under the following categories:

- Principles, Options, and Considerations in Rate Design
- Economics of Alternative Price Structures
- Pricing for the Poor
- Effects of Joint and Common Costs on Pricing
- Effects of Competition
- Demand Forecasting

Further divided into:

- Case Studies
- References
  - Core References
  - Sectoral References
  - Other References

## 5. Tariff Design

### Narrative

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Economics of Tariff Design

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3. Deviations from Marginal Cost Pricing: Multipart Prices

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# Other Resources

**Self Testing:** Test your command of the BoKIR content for each section. Answers are provided with an explanation and with references for further study.

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Which of the following is **false**?

- The price elasticity of demand is the responsiveness of demand to changes in price.
- The price elasticity of demand is calculated by dividing the percentage change in quantity demanded by the percentage change in price.
- The price elasticity of demand shows how an increase in price will affect total firm revenues; e.g., a value between -1 and zero indicates an inelastic demand.
- When demand is inelastic, a price increase results in a decrease in total revenue.

**Glossary:** Keywords throughout the text are hyperlinked to a glossary for complete definitions (also available in other languages).

**Tariff:** A rate, charge or condition approved by *regulatory agency* for a regulated utility; the term is also applied to government taxes on imported goods.

Self-Testing

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Demand Forecasting

Environment

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