Presentation to Representatives of the Public Utilities Regulatory Commission of Ghana

Overview of Rate Regulation

April 14, 2005

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Oregon Public Utility Commission

Oregon Commission Structure

- Three Commissioners appointed by the Governor
- Regulates electricity, natural gas, telecommunications, water, and wastewater services
- Parties: staff, Citizens' Utility Board, consumer groups, environmental advocates

Oregon Electricity Markets

- Three investor owned electric companies serving Oregon customers
- A multitude of small public utility districts, municipalities and cooperatives
- A vibrant wholesale market
- Bonneville Power Authority

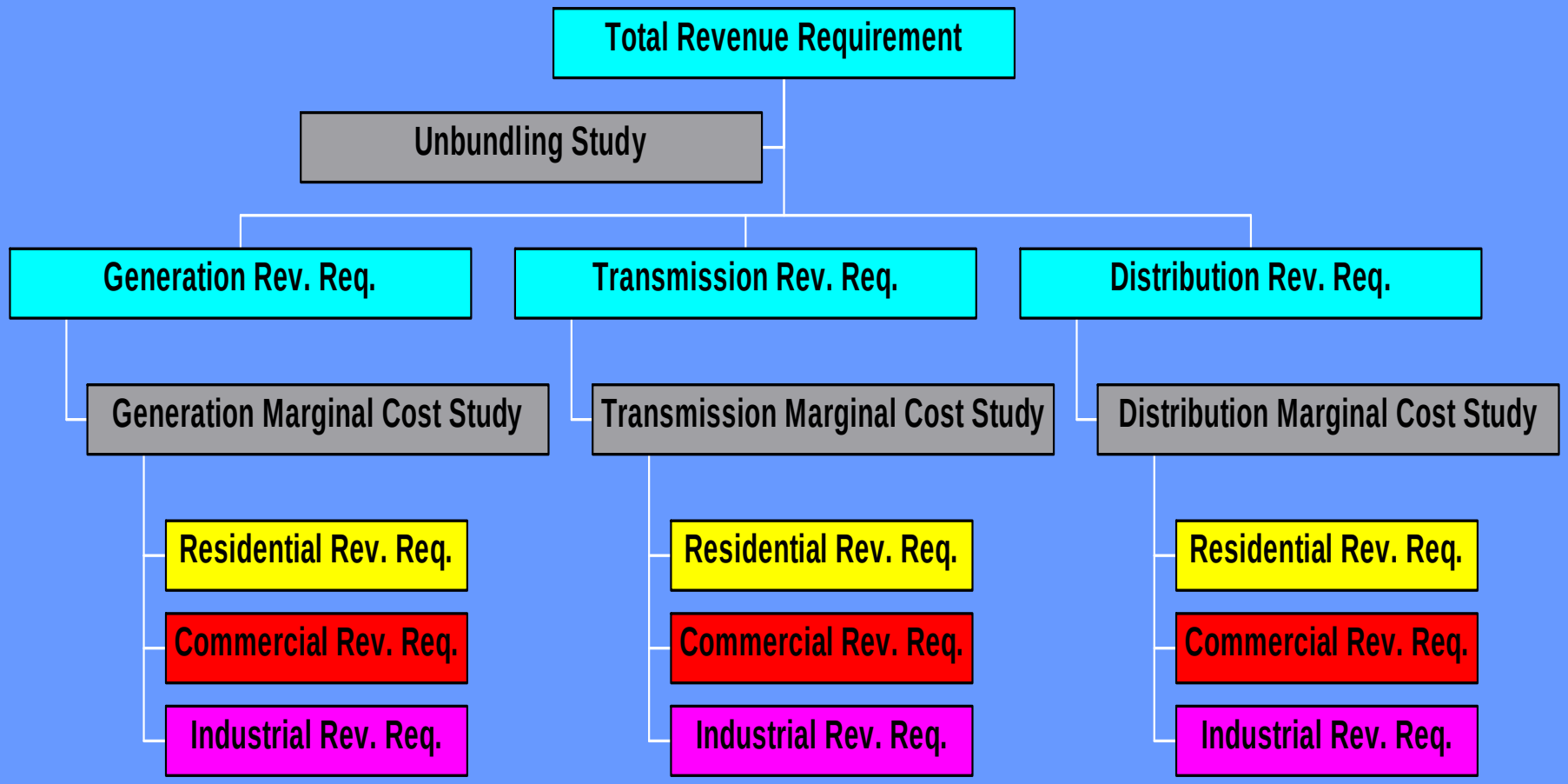
Topics

- Procedures for designing rates
- Data collection
- Price cap, rate of return, and hybrid models

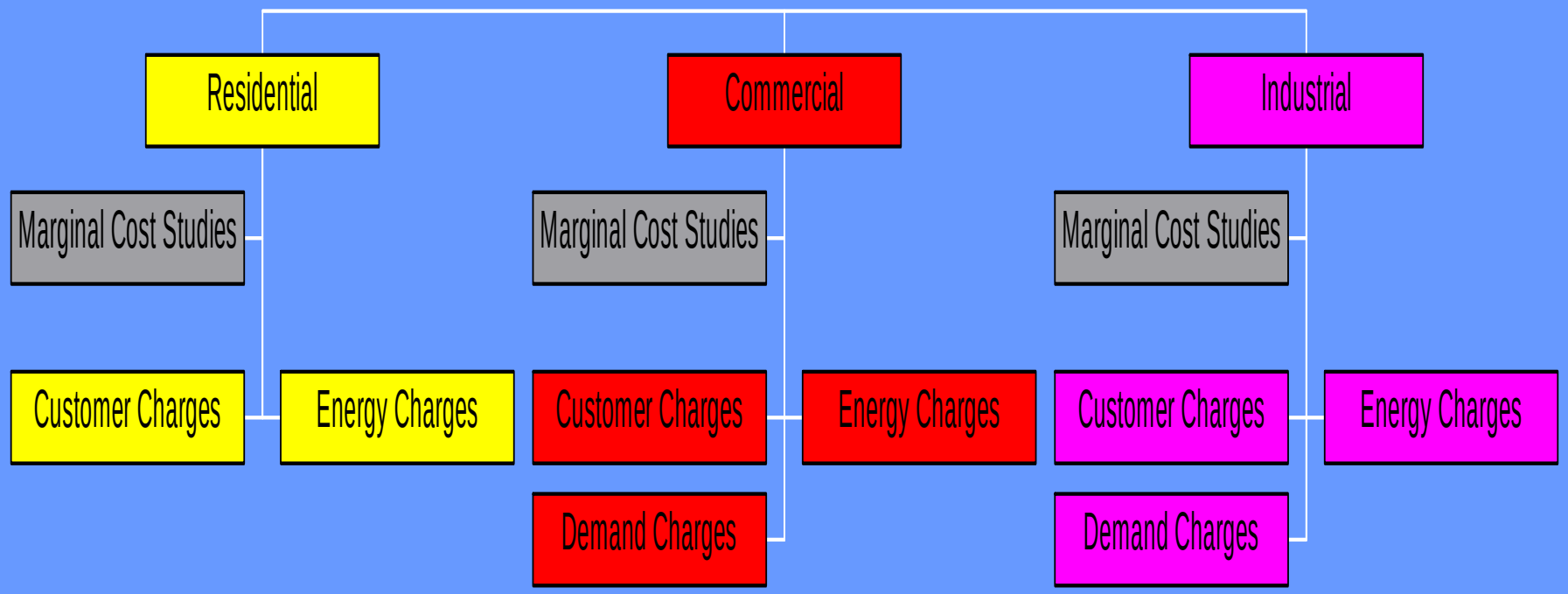
Procedures for Designing Rates

- Overview
- Unbundling
- Marginal Cost Studies
- Rate Spread
- Rate Design

Rate Spread


Total Revenue Requirement
Unbundling Study
Generation Rev. Req.
Transmission Rev. Req.
Distribution Rev. Req.
Generation Marginal Cost Study
Transmission Marginal Cost Study
Distribution Marginal Cost Study
Residential Rev. Req.
Commercial Rev. Req.
Industrial Rev. Req.
Residential Rev. Req.
Commercial Rev. Req.
Industrial Rev. Req.
Residential Rev. Req.
Commercial Rev. Req.
Industrial Rev. Req.

Rate Design


Residential
Commercial
Industrial
Marginal Cost Studies
Marginal Cost Studies
Marginal Cost Studies
Customer Charges
Energy Charges
Customer Charges
Energy Charges
Customer Charges
Energy Charges
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Data Collection

- Revenue Requirement and Unbundling
  - Uniform System of Accounts
  - Allocation Factors
- Marginal Cost Study
  - Construction costs
  - Expenses
  - Grid configuration
  - Billing units
- Rate Spread/Rate Design
  - Unbundling and marginal cost studies
  - Billing units
  - Existing rates
  - Policy objectives

Time-of-Use Rates Require Additional Data

- Usage data is required for time periods
- Time periods depend on objective
- Example of time periods:
  - On-peak: Monday-Friday 3:00 p.m. to 8:00 p.m.
  - Mid-peak: Monday-Friday 6:00 a.m. to 3:00 p.m. and 8:00 p.m. to 10:00 p.m.; Saturday 6:00 a.m. to 10:00 p.m.
  - Off-peak: Monday to Saturday 10:00 p.m. to 6:00 a.m.; Sunday All day

Price cap, rate of return, and hybrid models

- Overview, including revenue caps
- Determine objectives
  - Cost containment
  - Innovation
  - Risk
  - Regulatory oversight
- Develop Structure

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