

**Regulating Public Utility Performance:**  
The Law of Market Structure, Pricing and Jurisdiction

## **Chapter Six**

# **“Just and Reasonable” Prices in Non-competitive Markets: Cost-Based Rates Set by the Regulator**

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*The corporation may not be required to use its property for the benefit of the public without receiving just compensation for the services rendered by it. How such compensation may be ascertained, and what are the necessary elements in such an inquiry, will always be an embarrassing question.<sup>1</sup>*

Without competitors, an unregulated utility could raise prices at will, restrained only by its customers' readiness to reduce consumption. To prevent this abuse, statutes direct regulators to set rates that are "just and reasonable." In this no-competition context, regulators base rates on some measure of "cost." The law places on regulators a dual obligation: to protect the consumer from unreasonable costs, and to provide the utility a reasonable opportunity to earn a fair return. These obligations are the subject of this chapter. They apply to both state and federal regulators—to any commission engaged in cost-based ratemaking.

The phrase "cost-based rates" can confuse newcomers because there are different types of "costs" and different types of "bases." The phrase refers to rates set by the regulator based on some measure of costs. Contrast the phrase "market-based rates" (the subject of Chapter 7), which refers to rates set by the seller and disciplined by competitive forces. More specifically, the phrase "cost-based rates" is usually shorthand for "embedded cost rates": rates based on costs that a specific utility has actually incurred or expects to incur—including both fixed costs (e.g., generators, pipelines, pumps, land, headquarters building and vehicles) and variable costs (e.g., fuel, labor and taxes). But as this chapter will discuss, "embedded cost" is not the only path to "cost-based" rates. We will encounter "area rates," "rate caps," "performance-based rates," and FCC-mandated wholesale rates based on "total element long-run incremental cost" (TELRIC). Each variant has some connection to some type of "cost," and each has satisfied the statutory test of "just and reasonable."<sup>2</sup>

To explain the legal principles and their applications to the "cost-based" variations, this Chapter covers the following topics:

- (a) The rate-setting equations for embedded cost rates
- (b) What does "just and reasonable" mean? Statutory purpose and constitutional limit
- (c) Imprudent actions and inactions: Who bears the costs of inefficiency and waste?
- (d) Prudent actions but uneconomic outcomes: Who bears the costs of bad luck?

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1. *Smyth v. Ames*, 169 U.S. 466, 546 (1898).

2. For a peerless discussion of ratemaking from an economic perspective, see the first volume of ALFRED KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* (1970, 1988). Every page is worth the reader's attention. For this author's eulogy of Alfred Kahn, see <http://www.scotthemplinglaw.com/essays/alfred-kahn>.

- (e) Variations on costs and their bases
- (f) Departures from cost bases

## 6.A. The rate-setting equations

The most common method for setting cost-based rates is utility-specific ratemaking, known variously as "rate of return regulation," "rate base regulation," "embedded cost regulation" or "revenue requirement regulation." Using data on the utility's fixed and variable costs (sometimes historic, sometimes predicted, sometimes both), the regulator sets rates calculated to give the utility a reasonable opportunity to recover its prudent costs and earn a "fair" return on capital invested. Those calculations are based on assumptions about the likely number and type of customers and level of sales.

Embedded cost ratemaking uses two simple equations. The first equation describes the "annual revenue requirement": the total dollars the utility must receive during a specified future year (called a "rate year") as reasonable compensation for providing obligatory service. If the utility sells enough service to earn those dollars, it can cover its reasonable expenses (e.g., operating expenses, taxes and depreciation) and the interest on its debt and still have enough left for its shareholders to receive a reasonable return on their investment. Here is the equation:

$$\text{Annual revenue requirement} = \text{expenses} + \text{cost of capital}$$

where—

- expenses include operations and maintenance costs (e.g., labor and fuel), taxes, and depreciation; and
- cost of capital includes (a) interest payments to lenders plus (b) return on shareholder equity (the latter defined as commission-authorized return on equity multiplied by total equity).

*Terminology note:* The phrase "cost of capital," which refers to the cost of debt plus the return on equity, is sometimes referred to as "rate of return" multiplied by "rate base." In that definition,

- rate of return is the weighted rate of return for debt and equity; and
- rate base is the sum of all capital investment, whether funded by debt or equity, less accumulated depreciation.<sup>3</sup>

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3. An excellent explanation of depreciation and its role in the revenue requirement appears in *Louisiana Public Service Commission v. FCC*, 476 U.S. 355, 364–65 (1986):