



# Energy Industry Overview

## ***What is a Public Utility?***

A public utility is a capital-intensive business that furnishes an everyday necessity to the public at large (such as electricity and natural gas). Utilities provide services that are vital to the public welfare of society at prices and service-quality standards that are highly regulated by the government.

Businesses that provide services vital to society are businesses that are “affected with a public interest” (hence the term “public utility”)

The term “public utility” does not imply “publicly-owned”; indeed, most electricity is sold by privately-owned (investor-owned) utilities.

Typically, the utility is granted exclusive rights to serve a particular service territory because it is less costly to have only one business provide the service. The infrastructure required to produce and deliver a product such as electricity is very expensive to build and maintain.

A consequence of this monopoly status is a corresponding high degree of government regulation of the utility’s service practices, investments and prices. The utility is obligated to serve customers within its authorized service territory.

America’s utilities, including Indiana Energy Association’s members, work diligently to provide the safe, reliable and affordable energy we depend on to provide the electrical power and energy solutions that support our lives and economy.

## ***Brief History of Public Utilities in the U.S.***

Regulated energy public utility monopolies have existed since the early 1900s. Before regulation, competition existed, but resulted in the development of natural monopolies due to the significant investment required to provide service.

The role of utility regulation is:

- To act as a substitute for competition;
- To look out for the broad public interest;
- To balance the interests of the utility against that of the utility's customers; and
- To ensure just and reasonable utility rates and safe, reliable and adequate utility service.

Federal Power Commission in 1935 reorganized as the Federal Energy Regulatory Commission (FERC) in 1977. FERC regulates:

- interstate transmission of electricity, oil and natural gas;
- wholesale sales of electricity and oil;
- hydroelectric projects;
- interstate natural gas pipelines;
- natural gas storage facilities; and
- liquefied natural gas terminals.

In 1985, FERC Order 436 required natural gas pipelines to provide open access to transportation services. Furthermore, the federal Energy Policy Act of 1992 opened the door to wholesale competition in electricity. The EPA Act authorized FERC to require electric utilities to provide transmission access to other participants in the wholesale market. FERC implemented this access requirement in its 888 Order issued in April 1996.

### ***Traditional Public Utility Regulation***

**Indiana is a traditional utility regulation state.** What does that mean? Under traditional utility regulation, state laws allow energy public utility monopolies and provide for regulatory oversight. With this exclusive service territory for utilities comes an obligation to serve. In other words, the utility must meet all requests for service within its service territory with prices, terms, and conditions of service set by the regulatory agency. In Indiana, the regulatory agency is known as the Indiana Utility Regulatory Commission (IURC).

In Indiana, as in other traditional utility regulation states, the utility is:

- Entitled to recover prudently incurred costs; and
- Earn a fair return on its investments, hence the name for traditional utility regulation, "rate of return regulation."

State public service commissions, such as the IURC, have authority over retail sales made by public utilities within their states. As discussed above, FERC has authority over interstate energy transactions.

When a regulated public utility in Indiana seeks a rate increase, it files an application with the IURC, typically called a **rate case**. A rate case takes several months to complete and involves thorough analysis by IURC staff and other stakeholders, discovery, audits, written testimony, hearings, legal briefs, an IURC decision, and possible requests for reconsideration or appeal to the Indiana Court of Appeals.

Setting utility rates is a complicated process and involves many steps:

- **Establishment of the revenue requirement.** The revenue is the total annual revenue required by a public utility to recover the cost of providing utility service to its customers including a fair return on its investment. There are three key Supreme Court of the United States (SCOTUS) cases that address fair return to the utility of its investments and the revenue requirement:
  - *Smyth v. Ames* (1898): SCOTUS declared a reasonable rate is one that gives the utility a fair return on the fair value of property used in providing service.
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  - *Bluefield Water Works v Public Service Commission of West Virginia* (1923): SCOTUS said a public utility was entitled to earn a return on the value of its property used in providing service that is equal generally to the return earned by businesses with comparable risk.
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  - *Federal Power Commission v Hope Natural Gas Company* (1944): SCOTUS stated a utility's revenues should be enough to cover operating expenses and the capital costs of the business with the return to the equity owner commensurate with returns on investments in other businesses with comparable risks.
- **Determination of the revenue requirement for each customer class.** A portion of the total utility revenue requirement that must be recovered from each different customer class – residential, commercial, or industrial). This process requires a detailed class cost of service study.
- **Prices, or rates, must be established for each customer class.** Customer class may be divided into multiple rate schedules each having its own rates, terms and conditions (i.e., rate design). It is common to use separate prices

for each of a few different rate elements for each rate schedule. Rate elements may include:

- Monthly customer or basic charge;
- Per-unit energy price;
- Per-unit demand charge; and
- Minimum bill

### ***Rate of Return Regulation Formula***

Under traditional rate of return regulation, the revenue requirement can be expressed by the following formula:

Expenses (*those related to providing utility service*)

+ Return on rate base (*rate of return on rate base*)

### **Revenue Requirement**

*Rate of return*: utility's cost of capital (includes return on equity, or profit to the utility)

*Rate base*: investments related to providing service

#### **Revenue Requirement Calculation Example**

A	Total Expenses (\$)	\$1,278,500,000
B	Total Rate Base (\$)	\$1,763,432,000
C	Cost of Capital	7.65%
D	Return (\$) on Rate Base (C x B)	\$134,903,000
E	Revenue Requirement (\$) (A + D)	\$1,413,403,000

\*The Revenue Requirement formula above includes the utility's total cost of providing utility service to its customers.