



Canadian  
Gas Association

Association  
Canadienne du gaz



# **The Regulatory Process**

## **Introduction**

The purpose of this document is to provide the reader with an overview of the fundamentals of the economic regulatory process that regulated companies in natural gas industry comply with in the setting of their rates. Those companies are active at every stage of the process, bringing natural gas from the many wells in a gas field, in transporting it from the producing regions to the market areas, storing it or, finally, distributing it to the premises of the users, where it is consumed.

Economic regulation, particularly in the natural gas industry, is fast evolving. A number of new regulatory approaches are being implemented across Canada. Although some of these novel ways represent a departure from what can be referred to as the traditional regulatory process, the latter is still predominant in many jurisdictions. Therefore, grasping the fundamentals of the economic regulatory process remains essential.

The document, which has been prepared by the Regulatory Committee of the Canadian Gas Association, begins with a brief history of economic regulation in North America; it then describes the process, as it applies to a typical rate application and discusses the key issues that a rate application typically address; and finally it provides an indication of regulatory trends. A glossary of terms is also provided.

## **How the System Began**

### **The Early Utilities**

The earliest utilities were gas companies formed in the mid to the late XIXth century, to supply local communities with manufactured gas made from coke, so-called “city gas”. Next, were local electric companies, of which Thomas Edison’s Pearl Street power station, in New York City in the 1880’s was the first.

These enterprises evolved and grew independently. Each one set its own rates and extended its service as far as it was economically worthwhile to do so. It soon became evident that a great deal of capital was needed to construct the infrastructure associated with a utility operation – three to five times as much as for a factory or other industrial enterprises. It made no economic sense to duplicate such large facilities at needless cost.

### **The Need for Regulation**

Small local companies merged into larger entities as utility services grew in importance. But it was also clear that the public would not tolerate uncontrolled monopolies if they grew to any significant size. Today’s regulatory system, which acts as a surrogate or competition, evolved out of these conditions.

The regulation of Canadian gas utilities started in Ontario in 1906 and in Alberta in 1915. However, natural gas was not widely available in most of Canada until the completion by TransCanada PipeLines Ltd. (TCPL) of a trans-continental gas pipeline in the 1950’s. The pipeline transported Alberta gas as far east as Montréal; it was subsequently extended to

Quebec City with the completion of the TransQuebec and Maritimes (TQM) system in the 1980’s.

Almost all companies transporting or distributing natural gas today operate under provincial or federal regulation. Installations, which span more than one province, fall under federal jurisdiction and are regulated by the National Energy Board (NEB). Local distributors are regulated provincially.

Generally, distribution utilities are authorized to provide service in a specific area, under an exclusive franchise; they do not compete against other natural distribution companies, although they compete in the energy market against electricity, oil, coal, propane and, in some cases, wood or wood waste.

A gas company’s franchise obligates it to provide service at just and reasonable rates. This involves a balancing of customer interests with the interests of the gas company’s shareholders. At a minimum, the gas company must earn enough revenue to cover the cost of providing service (such as the cost of labour and supplies) and provide a reasonable return to compensate investors.

Rates set for the gas companies do not guarantee a profit. The rates allow the company, and ultimately investors in the company, the opportunity to earn a reasonable return on investment. As a general rule a company retains excess revenue. On the other hand, if it fails to earn its allowed return, because of higher than expected costs or lower than expected revenues, it cannot recover the loss through a rate increase. A company may apply for new rates to be effective prospectively: that is for a future period; however, it is not allowed to recover past losses.

## **Changing a Utility's Rates: the Basic Steps**

### **Documenting the Need**

Like any other business, a gas company is affected by major changes in costs or sales. But unlike other businesses, where these changes make it necessary to alter prices immediately, the gas company may not do so on its own. To change its rates, it must obtain authorization from a regulatory authority (referred to as "the Board" throughout this booklet).

The gas company must justify its request with complete facts and figures, demonstrating the need for a rate change. Justification is presented in a rate case, which is normally examined by way of public hearing process.

The inadequacy of a utility's rates to produce a reasonable return is demonstrated through a specific period (the test year) for which expenses and revenues are thoroughly documented. In the past this "test year" was based on a prior period or historical test year. Most jurisdictions now allow this documentation to be based on a future period, or projected test year.

All documentation is made public and may be questioned by interested persons or groups supporting or objecting to the proposed rate. These persons or groups are known as intervenors.

### **The Facts and Figures**

In its presentation to the board, the gas company usually includes the most recently completed fiscal year (also called the "historical" year), a "bridge" year, which combines actual year to date and estimated information for the current year, and the projected test year. Estimates or budget figures are scrutinized closely. Rates are always set prospectively.

Since the volume of natural gas sold in a given year varies with weather conditions, projected revenues are based on

average (or normal) temperature. In certain jurisdictions, sales are normalized to remove the effect of unusually cold or mild weather conditions.

### **The Preliminary Events**

A gas utility triggers a series of events when it applies for a rate increase. After it receives the gas company's application, the Board usually instructs the company to notify the affected parties by newspaper notices, giving the time, place and purpose of the hearings which are to take place to hear interested parties.

All customers from homeowners to large industrial users are entitled to participate. So are municipalities and special interest groups or associations that wish to present a collective point of view. These participants are the intervenors and they are frequently represented by lawyers, although this is not essential. Individuals may appear and speak for themselves.

The Board and intervenors review the application and the data filed by the gas company and may request clarification or more information. These requests are called interrogatories. The staff of the Board may also conduct a field investigation of the gas company and its operations.

Sometimes, a gas company may request an interim rate increase. The Board may authorize such an interim increase to prevent financial hardship, pending its final decision on a rate case. If the Board's final decision allows lower rates than the interim rates granted, the company must refund the excess revenue to its customers.

### **The Hearings**

At the hearings, the Board will ensure that sufficient evidence is presented, tested and put on the record to allow it to make an informed decision. Representatives from the company appear at the hearing and must be prepared to answer questions on why the rate change is necessary. This process is called cross-examination.

When the gas utility has been cross-examined on its financial data and evidence, the Board and the intervenors may present their own witnesses. These witnesses may be cross-examined by the gas company or by other intervenors, and all evidence is a matter of public record. When the hearings have been concluded, all parties have an opportunity to provide their opinion as to whether the need for the proposed rate change has been justified. This part of the hearing is called the argument.

The usual procedure is for the gas company to present its argument first, followed by others. At the end, the gas company has the opportunity to reply to the arguments of all the others.

When this process has been completed, the case rests with the Board, which, after considering the evidence, issues

its decision. Depending upon the quality of the intervenors' participation, the Board may authorize reimbursement of any part or all of the costs they incurred.

## **Appeals**

The decision of the Board may be challenged in different ways, depending upon the jurisdiction; these could include:

- A review by the Board itself, either on its own initiative or at the request of any interested party.
- A review by the Cabinet of the provincial government, if a petition is received from an interested party.
- An application for a judicial review by the courts, for questions of law or jurisdiction.

## **Focusing on the Major Issues**

### **The Background**

What a Board must do in every rate case is set a pricing level for the gas company's service that is fair to the customer while allowing the company the opportunity to earn a reasonable return on its investments.

To establish a fair price, a careful examination of the company's costs must be made. On the other hand, to determine a reasonable return for the company, the Board must first examine how much money the company has invested in facilities to provide services and then decide what is an adequate rate of return on this investment.

For gas utility, profit is not based upon a mark-up on sales. Instead, it is a return that the shareholders earn on the money they have invested over the years to build the gas company's system. This is a basic characteristic of gas company's profits and one that is often misunderstood by the public.

### **Rate Case Issues**

In almost all rate cases, certain major issues such as the ones listed below must be resolved:

- The amount of a gas company's investment in the assets it uses to provide service; this is known as its "rate base".
- The amount and treatment of expenses.
- The cost of natural gas supplies.

- The rate of return to be allowed on the company's rate base.
- The allocation of costs among classes of customers – residential, commercial and industrial, for instance.
- The rate each customer class will have to pay for the service it receives.

The Board usually considers the above issues in determining what a gas company's rate should be.

The Board determines the amount of the rate base. That is, it determines how much money the gas company is considered to have invested. This can be determined based upon an average for the year or the year-end balance.

At the same time, the Board will examine the gas company's operating expenses for the test year in order to make sure they are made to provide services to the customer.

The board will also determine what is a fair rate of return should be to those who have invested in the company.

Expenses and the required return are then added together to total the gas company's "revenue requirement". This represents the amount of revenue the company will have to collect from gas sales and transportation services in order to pay expenses and earn its allowed rate of return.

Once that amount has been determined, the Board proceeds to review how the total revenue requirement should be allocated among the company's different customer classes. The cost of serving each class of customers is different and the Board must decide how much of the total revenue should come from each class.

## **The Rate Base**

The rate base is made up of the amount of money the company has invested in facilities to serve its customers and the amount of working capital to keep the company operating.

Determining the size of a gas utility's rate base – what should be included in it at any given time and how it should be computed – is crucially important, both to the gas company and to its customers.

In determining a company's rate base, the Board deals with two principal issues:

- The company's investments for the test period; and
- Whether to exclude part of the company's assets.

The customers and the Board have an obvious interest in seeing that all the investments a gas company makes in property, plant and equipment are prudent and that those facilities will be useful in serving current and future customers.

Consequently, the gas company management is scrupulous in seeking to ensure that property additions will be allowed in the rate base. Otherwise, the company will not be allowed the opportunity to earn a return on the money invested to build those facilities. Such a situation would undermine the company's financial standing and make it more difficult to acquire capital in the future.

## **Expenses**

Expenses examined by the Board include money the gas company will spend for wages and benefits to employees, maintenance, advertising and promotion, customer services, materials and supplies, fuel, company administration, taxes, and so on.

Generally speaking, a Board cannot prohibit a gas company from making an operating expenditure. However, it can prevent the company from recovering the

expense through its rates. When that happens, the gas company must absorb the expense out of what would otherwise be the shareholder's return on investment.

In a rate case, taxes, including income taxes, are treated as an expense – part of the cost of providing service to the customer.

Another large component of a gas company's costs is depreciation. This expense represents recovery of the total costs of the property, plant and equipment needed to provide service to customers over the estimated useful life of these long-term assets.

## **The Cost of Natural Gas Supplies**

In 1985, the Government of Canada and the natural gas producing provinces enacted the "Agreement on Natural Gas Markets and Prices". The intent of this Agreement was to move away from administered natural gas pricing in favour of market-oriented pricing, which allows gas purchase prices paid to producers to be freely negotiated between buyers and sellers.

This means that end users are allowed to contract for gas at competitive market prices and pay the pipeline companies and the local distribution utilities the rates allowed by their respective regulatory Board, for transportation of the gas.

One of the results of the Agreement is that customers can opt to buy gas from the local distribution utility, which will arrange for the gas supply, or purchase directly their gas supply from the producer.

To accommodate the direct purchase option, gas companies have unbundled their rate structures, by developing separate rates for the commodity and for its transportation and storage.

One of the largest expenses incurred by a gas distributor is the cost of buying gas for those customers electing to buy their gas supply from the utility. The gas distributor is required to contract for natural gas supplies

from producing companies. The key concerns of the gas company in arranging its supplies are price and security of supply. It is in the best interest of all parties that the gas company achieve the best possible price for the customer. The gas company must demonstrate to the Board it has been prudent in arranging its supplies in order to reflect the cost of natural gas supplies, a separate hearing may be held to deal with that subject.

## **The Rate of Return**

Every rate case eventually centers on the fundamental question: What rate of return should the gas company be allowed to earn?

In setting gas rates, two kinds of rates of return are important: the total rate of return (called return on rate base), and the return to shareholders (called return on equity).

The total rate of return, or return on rate base, is the broader measure of a gas company's overall cost of capital from all sources. The facilities represented in the rate base have been purchased with funds the gas company has raised from its shareholders and with money the company has borrowed. The total rate of return, then, must be sufficient to pay interest costs on the borrowed money and to pay the shareholders for the use of their capital.

The allowed return on equity represents the gas company's profit and is part of the forecast total rate of return; it may be paid to shareholders in the form of dividends or it may be reinvested into the business. The return on equity is generally expressed as a percentage applied to the portion of the gas company's total investment that has been provided by its shareholders, through the purchase of stock and earnings reinvested.

## **Determining a Reasonable Return**

Regulators try to determine the gas company's cost of capital – what it costs the

company to obtain capital from lenders and shareholders.

In doing this, all boards – Canadian or American – continue to be guided by the ground rules set forth by the United States Supreme Court more than 70 years ago:

“A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public, equal to that general part of the country, on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures”.

“The return should be reasonable sufficient to assure confidence in the financial soundness of the utility, should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary to the proper discharge of its public duties. A rate of return may be reasonable at one time, and become too high or too low by changes affecting opportunities for investments, the money market, and business conditions generally”.<sup>1</sup>

In stressing the changing marketplace, the court had in mind exactly the sort of fluctuations that occur in the financial markets from one decade to the next. Thus, what might have been a reasonable rate of return in the 1980's may be quite unrealistic in conditions prevailing in the 1990's.

In a period of low inflation, for instance, investors or lenders in gas company stocks and bonds will continue to require competitive returns which take into account the relative risks of their. However, expected returns will be less than during a period of high inflation and interest rates.

Also, in times of economic slow down, regulated utilities are often singled out as enjoying high returns. Although this

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<sup>1</sup> *Bluefield Waterworks & Improvement Company v. Public Service Commission of W. Va.* 262 US 679 (1923).



may be true, one has to keep in mind however that in times of economic boom, a utility rate of return does not necessarily follow the general upward trend in profits. Utility returns are relatively stable from year to year, as they tend towards the long-term average of the returns of companies with comparable risk.

judgment can be questioned and debated. When designing rates, careful consideration must also be given to market conditions, especially competitive energy prices.

### **Cost Allocation and Rate Design**

Gas companies usually have three main classes of customers – residential, commercial and industrial. The cost of serving each is different. Generally speaking, widely dispersed residential customers, each using a relatively small amount of gas but needing a large quantity of energy on extremely cold days, are more costly to serve than large industrial customers, having a relatively stable demand for gas and consistently consuming large volumes.

In determining what each class of customers will pay, gas companies and Boards have normally sought rates that reflect the differing costs of servicing the customer classes.

One tool used by both the gas companies and the Boards is a detailed cost allocation study. Such a study attempts to allocate all investments and operating costs among various groups of customers. This usually involves some judgmental allocation of facilities and services used by more than one group or class of customers.

Other considerations in designing rates may include rate stability, differing risks, competition, the interrelationships among various rates and ease of administration.

In any case, it is clear that all costs must be allocated among different classes and within each customer class. This is different enough just from the technical and accounting standpoint. Though many numbers and formulae may be involved, allocating costs and designing rate structures are not exact sciences. Many technical judgments have to be made and any

## **Regulatory Trends**

A number of trends are taking place in the natural gas industry and in the regulatory environment in particular. Among those trends are the streamlining of the regulatory process, the introduction of incentive regulation, the broadening of public interest considerations and, last but not least, the trend towards deregulation.

### **Streamlining of the Regulatory Process**

Everywhere in North America, regulatory bodies are attempting to streamline the regulatory process with the view of reducing delays as well as costs, while increasing quality and customer satisfaction. Increased use of informal means of reaching agreement between parties, such as Alternate Dispute Resolution (ADR) approach and the determination of the rate of return on equity through the use of predefined formulae rather than full-fledged hearings are two examples of ways to streamline the regulatory process.

### **Introduction of Incentive Regulation**

Traditional rate making is based on the cost-plus approach. Although utility costs are scrutinized by the Boards and the numerous intervenors, it is questioned whether the traditional ratemaking process provide sufficient incentive for improving performance. The introduction of incentives encourages increased innovation and tighter cost management, thus benefiting both the utility's shareholders as well as its customers. Price caps, the use of performance indexes and the sharing of cost savings are such incentives based regulatory approaches.

### **Broadening Public interest Considerations**

This Trend consists in the consideration of social and environmental issues rather than focusing exclusively on financial factors in arriving at regulatory decisions. Insistence that utilities practice demand side management (DSM) rather than simply increasing supply, the promotion of energy efficiency, the undertaking of integrated resource planning (IRP) and the study of environmental impacts are manifestations of the trend towards a broader scope of utility regulation.

### **Deregulation**

As market structures are altered through the entrance of new players, changes in policy or the introduction of new technologies, competitive market conditions emerge. Consequently, the regulation of certain services or products, which were offered under monopolistic rules, becomes redundant. Regulated utilities are being challenged in terms of why they must provide certain services. This ongoing challenge is causing many regulators, intervenors and the utilities themselves to examine many utility services with the view to determine whether certain components could be better served by an open, competitive market place. The deregulation of gas commodity prices and the subsequent unbundling of utility rates in order to allow agents/brokers/marketers (ABM's) to provide an alternate supply source to utility customers is an example of reliance on competitive forces for a previously monopolistic service.

## Glossary

**Application:** A request by a utility to a regulatory board for approval of a new rate, or for a change in rates, service area, or facilities.

**Argument:** The final step in the hearing, in which participants summarize their positions on various matters of concern.

**Board:** A government body charged with responsibility for approving rates charged by utilities. Also called the regulatory authority.

**Bridge year:** The year between the company's most recently completed actual year and its projected test year.

**Capital:** The funds required to finance the company's investment in property, plant, equipment and other assets.

**Cost of Service:** The total annual costs incurred by a gas company, which must be recovered in its rates.

**Decision:** The document which sets out the Board's findings.

**Depreciation:** Represents an estimate of the decline in service potential of an asset during a specific time period.

**Equity:** The amount of funds invested by holders of common and preferred shares.

**Evidence:** Facts, testimony, objects etc. presented as proof of the issues in question in the hearing.

**Financial Integrity:** The well being of a corporation, generally measured by its ability to raise capital in the marketplace.

**Fiscal Year:** The twelve month period for which a company keeps its financial accounts.

**Franchise:** A privilege granted by local municipalities or provincial government, to gas utilities to operate and provide gas service, exclusively within a defined geographic area.

**Historical Year:** The most recently completed year for which data is provided.

**Interim Rate Adjustment:** A rate adjustment which is approved pending a final decision. Interim rate could be subject to retroactive adjustments when final rates are put in place.

**Interrogatories:** Requests for more information or for clarification of information already supplied in an application.

**Intervenor:** An active participant in the hearings, typically representing one or a group of customers.

**Issue:** An area of disagreement or controversy that requires consideration in a rate case.

**Rate Base:** The rate the utility has invested in assets, minus accumulated depreciation, plus an allowance for working capital and other amounts that may be allowed by the regulator.

**Rate Case:** The process through which a utility seeks to change its rates.

**Rate of Return:** Income expressed as a percentage of investment.

**Regulation:** The system used to control and approve the conduct and process of a utility.

**Retained Earnings:** The portion of a company's earnings that are not paid in dividends but are reinvested in the business.

**Revenue Requirements:** The total funds to be generated by gas rates in order to recover the total costs of providing service.

**Shareholder:** The investor in a share certificate which represents ownership in a company. Each share represents 1/nth ownership of the company involved, where n is the total number of shares outstanding.

**Test Year:** A period of 12 consecutive months, usually the company's next full fiscal year, for which projected revenues, costs, expenses and rate base are studied, in order to evaluate whether the existing rates are adequate to produce a reasonable rate of return.

**Unbundled Rate Structure:** A rate structure which prices services separately so that customers are free to choose among them. For instance, pricing gas supply (the commodity) separately from transportation and storage. This allows customers to provide their own gas to the distributor and pay for transportation only.

**Utility:** A company providing gas, electric, water or telephone service to the public.

**Witness:** An individual who testifies before the Board on a particular area of responsibility or expertise.

**Working Capital:** The amounts of funds needed to allow for the time lag between the payment of ongoing operating expenses and the collection of corresponding revenues.