

A large silhouette of a wind turbine dominates the left side of the frame, set against a background of a sunset or sunrise sky with warm orange and yellow tones. The sky transitions to a clear blue at the top. A white geometric shape, resembling a triangle, is positioned in the upper left corner. The text is overlaid on the central part of the image.

# INVESTOR-OWNED ELECTRIC UTILITIES

Minnesota





# ABOUT XCEL ENERGY

Xcel Energy is an investor-owned, regulated public utility serving half of the homes and businesses in Minnesota. The company has existed for over 100 years, employs more than 5,000 people across the region and maintains its corporate headquarters in Minneapolis. Under the regulatory compacts in the states it serves, Xcel Energy provides efficient, safe, reliable electric service to communities across Minnesota and in portions of North Dakota, South Dakota, Wisconsin, Michigan, Colorado, Texas and New Mexico.

# REGULATED PUBLIC UTILITIES

Public utilities deliver products and services like electricity, natural gas and water to residential and business customers across the nation. There are four main characteristics that led to the formation of public utilities:

- Their product is essential to the health and welfare of people, businesses and the economy.
- They require a large, up-front capital investment.
- Duplication of infrastructure is inefficient.
- They have substantial economies of scale.

Because of these characteristics, public utilities, like the electric utilities in Minnesota, have the following features:

- Assigned exclusive service territory to avoid duplication of capital-intensive infrastructure and take advantage of economies of scale;
- Universal service and non-discriminatory pricing to ensure universal access to essential services;
- Public regulation to ensure prudent, efficient operations and just, reasonable rates.

Public utility services are delivered through three different business models:

- investor-owned utilities (IOUs)
- cooperative utilities
- municipal utilities

Xcel Energy is an IOU, and consequently is subject to more expansive state regulation than other forms of public utility.





# THE REGULATORY COMPACT

Because public utilities do not compete for customers, the regulatory process is required to ensure prudent and efficient operations and just and reasonable rates. Public regulation of IOUs is established in Minnesota state law. This is sometimes called the “Regulatory Compact.”

The state government provides:

- Exclusive service territory to each public utility.
- A reasonable rate of return to the utility’s investors.

The utility agrees to:

- provide service to all customers in its territory.
- charge non-discriminatory prices set by the Public Utilities Commission (PUC). (See **Rates** section.)
- reliably deliver all the energy its customers demand, 24/7.
- file detailed proposals and receive approval from the PUC for all new construction of large energy infrastructure. (See **Resource Planning** section.)

# UTILITY RATES

Electric utility bills include various types of charges. (See **Understanding Utility Bills**.) A significant portion of each monthly bill is the charge for electricity used during the month. On Xcel Energy bills, the rate is called the Energy Charge.

The Energy Charge is the amount that utilities charge per kilowatt-hour (kWh) for the electricity they deliver to customers. The rate covers the utility's capital investments, operating and maintenance costs and a reasonable rate of return on investment. The capital investment, operating and maintenance costs include power plants, transmission and distribution lines, employees, buildings and equipment necessary to operations. The rate is set by order of the PUC through the Rate Case process.

The Energy Charge does NOT include fuel costs or the cost of power purchased from other sources not owned by the utility.

The PUC sets different Energy Charge rates for different classes of customers (commercial, industrial, residential, etc.). But all customers in the same class pay the same rate. In addition to the Energy Charge, the PUC also sets the monthly Basic Charge and other charges through the Rate Case process.



# RATE CASES

A utility files a Rate Case with the PUC whenever it needs to change its rates. The PUC can also require a utility to file a rate case in order to adjust rates. For the purpose of setting the Energy Charge, the filing contains three key elements:

1. How much energy the utility believes its customers will demand in the next calendar year.
2. How much the utility will invest in infrastructure and spend for operations and maintenance in that year.
3. The amount the utility believes would be a fair return on its investments, also known as “return on equity” or ROE.

Projected investments and other costs are provided in detail. The projected demand is buttressed by modeling and studies based on past and expected future behavior. The ROE is based on an assessment of expected rates of returns for businesses in the economy as a whole that have similar business risks as the utility.

In Minnesota, utilities are allowed to submit “multi-year rate cases” which include more than one year of data. This innovation allows longer periods between rate cases. They are more complicated, but essentially follow the same process as single year rate cases.

In simple terms, the Energy Charge is calculated by the following equation:

$$\frac{\text{Investment and cost to operate} + \text{ROE}}{\text{Energy demand (kWh)}} = \text{Rate}$$

All the data submitted by the utility in support of its rate case is referred to an Administrative Law Judge (ALJ) for examination and analysis. Any interested person or organization can formally “intervene” and participate in the rate case. Intervenors can ask the utility to respond to written questions about the basis for its rate case. They can also present evidence and make arguments challenging or supporting the utility’s case. Intervenors often present expert testimony and other evidence for the ALJ to consider.

The ALJ presides over the collection of this information, holds hearings, takes testimony and, finally, makes non-binding recommendations to the PUC. The PUC debates all the evidence and arguments and issues a final order, setting the rates for the utility. This process can take up to two years.

# FUEL CLAUSE ADJUSTMENT

A utility's base rates include the projected costs of capital investment, operations and maintenance. This calculation does not include two very important costs:

- the cost of fuel to run the utility's power plants.
- the cost of purchasing energy from other companies.

## **FUEL COSTS**

The cost of fuel, like natural gas or coal, can fluctuate based on supply and demand factors and is difficult to predict over longer periods. In Minnesota, we do not want our electric rates to change as often as fuel prices. Setting new rates is a complex and lengthy process and should not be required every time fuel costs fluctuate. Therefore, the utility passes the wholesale cost of fuel to its customers, based on their kWh energy usage, without markup or profit.

## **PURCHASED POWER COSTS**

Not all energy provided by your utility is made at utility-owned power plants. For a variety of reasons, utilities may choose to serve their customers with energy purchased from a third party. This often happens with wind and solar energy. The wind or solar installation is built, owned and operated by an independent power producer (IPP) that contracts with the utility to sell the energy they produce. This includes community solar gardens. The contract is sometimes called a Power Purchase Agreement, or a Purchased Power Agreement. (We call it a PPA; it works either way). Under a PPA, the utility pays an agreed upon rate per kilowatt hour of energy purchased and passes that cost to customers in the Fuel Clause Adjustment. Utilities do not mark up or earn a profit on the transaction.

The PUC periodically reviews the utility's fuel and market energy prices to ensure that its purchasing strategy is in the best interest of its customers.

# ELECTRIC UTILITY BILLS



**FLIP YOUR FRIDGE AND GET \$50!**  
We'll pick up your old working fridge or freezer and recycle it -- for FREE. And, we'll send you a \$50 rebate!

**Save money on your energy bill**  
Refrigerators over 15 years old could be costing you more than \$80 per year to run. By properly recycling your old refrigerator and replacing it with a new ENERGY STAR certified refrigerator, you can save more than \$220 over their 12-year lifetime.

Schedule your free pickup today! Visit [xcelenergy.com/fridge](http://xcelenergy.com/fridge) or call 800-529-5795.

SERVICE ADDRESS	ACCOUNT NUMBER	DUPLICATE
		09/09/2022
STATEMENT NUMBER	STATEMENT DATE	AMOUNT DUE
	08/15/2022	\$3,238.64

SERVICE ADDRESS: NEXY READ DATE: 09/15/22  
ELECTRICITY SERVICE DETAILS  
METER NUMBER: 08175  
METER TYPE: 08175

METER DESCRIPTION	CURRENT READING	PREVIOUS READING	USAGE	UNIT
Total Energy	2400 Actual	2412 Actual	871 kWh	kWh

DESCRIPTION	USAGE UNITS	RATE	CHARGE
Basic Service Chg			\$18.00
Energy Charge - Summer	871 kWh	\$0.12810	\$110.72
Fuel Cost Charge	871 kWh	\$0.026695	\$23.09
Sales True Up	871 kWh	\$0.087960	\$75.41
Affordability Chrg			\$1.90
Resource Adjustment			\$17.33
Interim Rate Adj			\$1.43
<b>Subtotal</b>			<b>\$158.12</b>
City Fees		5.00%	\$7.90
Franch Improvement Tax		0.50%	\$0.79
City Tax		0.50%	\$0.84
County Tax		0.15%	\$0.25
State Tax		6.875%	\$11.40
<b>Total</b>			<b>\$180.49</b>

**INFORMATION ABOUT YOUR BILL**  
For an average residential customer, 49% of your bill refers to power plant costs, 12% to high voltage line costs and 39% to the cost of local wires connected to your home.

VALIDATION ONLY

- 1 **Basic Service Charge** – This is an amount charged to all similar customers for certain fixed costs (metering, billing, etc.). It does not vary based on how much energy is purchased. It is a flat amount every month. The Basic Service Charge is set by the PUC in a Rate Case.
- 2 **Energy Charge** – This is the Rate that is set during the Rate Case, applied to the amount of energy the customer uses, as shown on the electric meter. (See **Rate Case** section). It is the Rate multiplied by the energy usage in kilowatt-hours.
- 3 **Fuel Cost Charge** – Fuel costs are included on a separate line on the bill and vary with the amount of energy the customer uses. The Fuel Cost Charge also includes the cost of any energy that the utility purchases from other power producers. (See **Fuel Clause Adjustment** section). Both the cost of fuel and the cost of purchased energy is a direct pass-through. The utility does not mark up this price or earn any profit on these transactions.
- 4 **Sales True Up** – Energy sales are impacted by weather, which can cause energy usage to be lower or higher than was predicted when Rates were set, leading to charging more or less cost than the PUC authorized.
- 5 **Affordability Charge** – This charge supports bill payment assistance and discount programs for low-income customers.
- 6 **Resource Adjustment** – This charge covers the costs of certain items that were not included the last time rates were set in a Rate Case. This includes certain transmission costs, energy conservation programs, state energy policy costs, certain renewable costs and the Renewable Development Account. The amount each customer pays will depend on the amount of energy they use.
- 7 **Interim Rate Adjustment** – This charge appears on bills when a utility has a new Rate Case pending. It is set by the PUC in anticipation of an eventual rate change at the conclusion of the Rate Case. Once the final Rates are set by PUC order, any overpayment made by Interim Rates will be credited back to the customer's bill and any underpayment collected by a surcharge.
- 8 **Taxes and Fees** – These charges are required by various levels of government and paid to those government agencies.



# RESOURCE PLANNING

Xcel Energy and the other two investor-owned electric utilities in Minnesota are required to submit Integrated Resource Plans (IRP) to the Minnesota Public Utilities Commission. These comprehensive plans provide a road map of how each utility will meet the electric demands of the customers they serve over a 15-year planning period. IRPs are refreshed every 2-3 years and the approval process often exceeds 2 years, with dozens of interested parties submitting comments.

Maintaining a diverse set of energy resources helps ensure reliability and mitigate risk. These generation resources are the building blocks of the grid and ensure resource adequacy, energy adequacy, and operational flexibility. They include

- baseload and other firm dispatchable resources (combined natural gas, gas turbines and nuclear)
- variable resources (wind and solar)
- fast response and balancing (demand reduction and batteries)
- energy conservation programs

After an IRP is approved, Xcel Energy undertakes competitive acquisition processes to identify projects that can be used to fulfill the road map set forth in the IRP. The company may acquire new generation projects by issuing a Request for Proposals, expanding an existing customer program, or submitting a Certificate of Need to construct a new energy facility itself. These processes all allow for other stakeholders, including local jurisdictions, to have input into the proposed projects and have their priorities and concerns heard.





## UNDERSTANDING “ENERGY” AND “CAPACITY”

In order to ensure reliable energy for all customers at all times, resource planners have to think about energy and capacity. Specifically, we must be certain that we can produce or purchase enough energy to meet customer needs every hour of every day and have enough capacity online to meet our reserve requirements. Energy is what we deliver to our customers, measured in kilowatt-hours (kWh). Capacity is the maximum output an electricity generator can physically produce per hour, measured in megawatts (MW).

“Nameplate Capacity” is the megawatts the generator can produce if it is running at full power. For example, the Monticello Nuclear plant has a Nameplate Capacity of 647 MW. Xcel Energy's Ben Fowke Energy Center in southern Minnesota has a Nameplate Capacity of 100 MW from its 67 wind turbines.

No electricity generator can run 24/7 forever. Even nuclear plants must be shut down at times for refueling and maintenance. Utility resource planners, then, consider “Accredited Capacity,” which is based on how much generation will be available, and what times of day it will be available, based on its history of energy production. Accredited Capacity for a nuclear plant is well over 90% of its Nameplate Capacity. Accredited Capacity for wind and solar energy is lower, largely because they are not necessarily available when the demand for energy is high.

Because public utilities are held responsible for providing reliable energy to all customers at all times, ensuring sufficient capacity to serve customers under any circumstance is a critical part of resource planning. Public utilities use accredited capacity in resource planning to ensure we meet our customers' needs and our required reserve margins with safe, reliable and clean energy while keeping bills low.





# THE GRID

Xcel Energy and the other electric utilities own and maintain the transmission lines but the Midcontinent Independent System Operator (MISO) operates the interconnected grid. MISO is an independent, nonprofit organization that operates the electric **transmission system** across 15 states and the Canadian province of Manitoba. MISO is one of the world's largest energy markets, with over 470 market participants serving over 42 million people.

The interconnected transmission grid operated by MISO permits utilities to buy and sell energy from each other to meet fluctuating demand. This energy market facilitates cost savings and reliability at the most competitive price.

The electric **distribution system** is owned and operated by Xcel Energy and the other investor-owned utilities, cooperatives, and municipal utilities with assigned service territory in Minnesota.

Large electricity generation facilities typically are connected directly to the transmission system and must work through MISO to interconnect. Smaller distributed energy projects, like rooftop solar and Community Solar Gardens, typically interconnect to the distribution system of the applicable utility.

# WHY ARE RATE CASES, RESOURCE PLANS AND CERTIFICATES OF NEED REQUIRED?

Public utilities serve exclusive territories where they do not face competition for customers. The territory model avoids inefficient duplication of large, expensive infrastructure, takes advantage of economies of scale, and ensures universal access to an essential service with non-discriminatory pricing for all customers. Because utilities do not compete for customers, however, state and federal regulatory agencies ensure that utilities operate efficiently and provide good customer service. Rate regulation, resource planning and Certificates of Need are designed to accomplish that.



# CONCLUSION

The Investor-Owned Public Utility business model has unique characteristics:

1. An obligation to serve all customers in its service territory.
2. Non-discriminatory pricing.
3. Rates established by the PUC with substantial public input.
4. Infrastructure investments regulated by the PUC with substantial public input.
5. Exclusive service territory established by the PUC.
6. Rate of return on investment regulated by the PUC with substantial public input.

This business model was created because public utilities provide a product that is essential to the health and welfare of all homes and businesses in the state, where substantial economies of scale can be realized by avoiding inefficient duplication of large capital investments.

All public utility customers have equal access to safe, reliable, increasingly clean energy and share equally in its costs and benefits.

Some states and regions have tried other electric utility business models, with mixed results.

Minnesota's public electric utility model provides a robust grid and safe, reliable, clean energy generation. Together, our state's electric utilities respond nimbly to ever-changing public policies, customer preferences and emerging technologies.

Xcel Energy is proud of our role in helping Minnesota grow and thrive with reliable, low-cost energy for more than 100 years and looks forward to doing so for a very long time.

## STATUTES

This booklet is intended to provide legislators and others who are interested in energy policy with a high-level look at how Public Utilities are regulated in Minnesota. Our goal is to provide the basics of the regulatory compact. There are many details, complexities and special circumstances that are provided in statute and regulation that are not covered by this document.

The topics covered in the document are grounded in Minnesota statutes. Statutes related to Public Utilities are primarily found in Chapter 216B of Minnesota Statutes. Some specific sections of that Chapter that cover items mentioned in this document are:

**Rates and Rate-setting:** Minnesota Statutes sections 216B.03 through 216B.075 and 216B.16.

**Resource Planning:** Minnesota Statutes section 216B.2422

**Certificates of Need:** Minnesota Statutes section 216B.243

**Exclusive Service Territories:** Minnesota Statutes sections 216B.37 through 216B.43

