

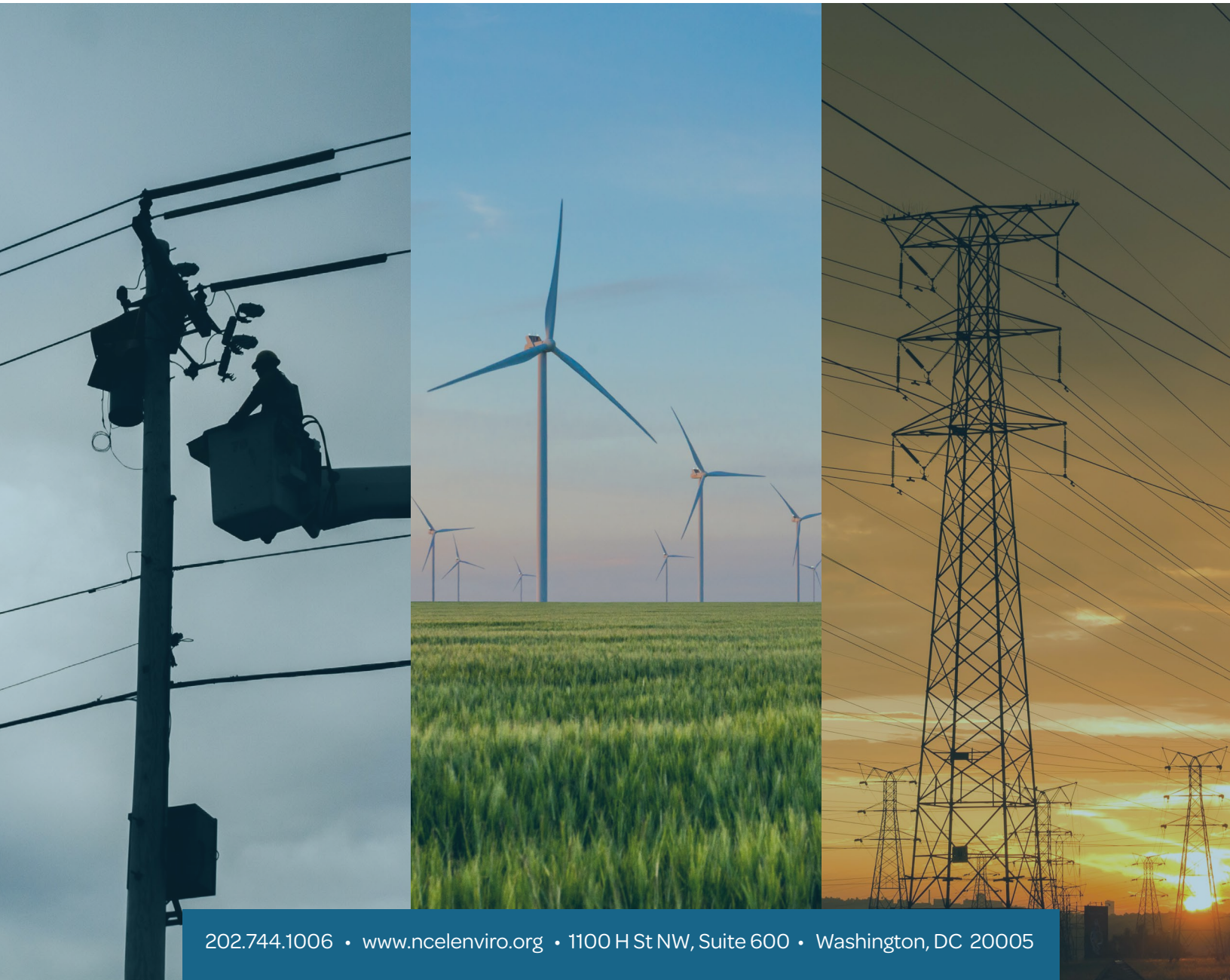
National Caucus of Environmental Legislators

Utility Briefing Book



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Introduction

Utility policy plays a pivotal role in the pursuit of climate goals and the transition from a fossil fuel-based economy to a clean energy economy. The utility sector is a [primary source](#) of greenhouse gas emissions, with the power sector contributing 25% to total U.S. emissions. Currently, about [60% of electricity generation](#) is still derived from fossil fuels such as coal, natural gas, petroleum, and other gasses. By creating and implementing effective utility policies, legislators can help steer the energy industry away from fossil fuels and towards cleaner, more sustainable practices. The benefits from the transition to a clean energy economy cannot be achieved without [investing in](#) an efficient, optimized, and modern grid that can effectively utilize new technologies and resources, while also responding to customer needs and decreasing customer costs. The electrical grid plays a pivotal role in the clean energy future by enabling the reliable [integration, distribution, and utilization](#) of clean energy resources on a large scale.

*All legislation in this briefing book marked with **two asterisks “**”** indicates **bipartisan sponsorship**.*

Overview

This briefing book provides more information and policy options for the following areas of utility policy:

1. Understanding Utilities: The Key to Enacting Effective Utility Policy	p. 3
2. Utility Regulator Mandate	p. 5
3. Performance-Based Regulation	p. 6
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Overview

Utilities may provide services across three main segments: generation, transmission, and distribution of electricity.

Generation is when power plants burn fossil fuels or clean energy facilities harness energy like wind or solar to generate electricity. This [electricity is transmitted](#) on high-voltage power lines from power plants to local areas or regions.

These **transmission** lines form the [network known as the power grid](#), which connects different parts of the country and facilitates the movement of electricity. Electricity moving through the transmission system is reduced in voltage through transformers, and then sent through the **distribution** lines connected to homes, businesses, and other customers.

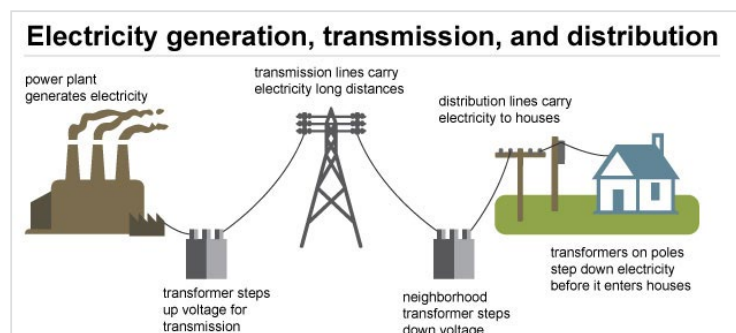


Figure 1: Electricity generation, transmission, and distribution visualized.
Source: US Energy Information Administration ([original](#)).

In some cases, a utility might be [vertically integrated](#), meaning that they are responsible for generation, transmission, and distribution of electricity. In other cases, there are retail utilities that buy electricity from various sources, including generating companies, and sell electricity directly to the end consumer. Utilities also [perform a variety of other roles](#) such as customer service and billing, energy efficiency programs, renewable energy integration, and grid modernization. The roles that a utility provides typically are determined by the type of utility and the market structure of any state.

Utility Ownership

There are [three main types](#) of utility ownership models: Investor-Owned Utilities, Publicly-Owned or Municipal Utilities, and Rural Electric Coops.

Investor-Owned Utilities (IOU)

- For profit, shareholder owned
- Regulated by the state Public Utilities Commission (PUC)
- Governed by independent directors elected by corporate shareholders

Publicly-Owned Utilities (POU) or Municipal Utilities

- Not for profit, community owned
- Regulated in very limited instances by the PUC
- Governed by elected/appointed boards- mayors, city council members, and citizens

Rural Electric Cooperatives (Co-Ops)

- Not for profit, member owned
- Regulated some by the PUC
- Governed by member-owner elected boards



Utility Regulation

Utilities, mainly Investor-Owned utilities (IOU), are subject to regulation by [state public utility commissions \(PUCs\)](#), also known as public service commissions (PSCs) because of the monopoly characteristics of the industry. Utility regulators ensure the utilities provide safe and reliable energy while balancing the compensation for the utilities through rates. These regulatory bodies oversee utility operations, review rate proposals, approve investments, and establish rules and standards.

In the case of Publicly-Owned Utilities (POU) and rural electric cooperatives, the rate-setting process differs. Since they are [owned and operated by government entities](#), such as municipalities, counties, or public utility districts, customers of these utilities can have [varying levels of involvement and influence](#) in the rate-setting process compared to investor-owned utilities. [Rural Electric cooperatives \(co-ops\)](#), are member-owned utilities, meaning the rate-setting process can involve members, assessing cost-of-service, and board decision-making.



A Closer Look: Rate Setting

Rate setting is an important function of utility regulation. The regulatory process involves evaluating the costs incurred by utilities, including investments in infrastructure, fuel costs, maintenance, and other operating expenses. Rates are then set to recover these costs and provide a reasonable return on investment for the utility that is sufficient for fulfilling the obligation to serve.



Overview

Utility companies are often considered [natural monopolies](#) due to their [high upfront costs](#), which [create barriers to entry](#) and make it economically inefficient to have multiple competing providers. To address this, each state has its own regulatory body, known as Public Utility Commissions (PUCs), that oversees and regulates utilities at the state level. The primary responsibility of PUCs is to protect the public interest by ensuring safe, reliable, and accessible utility services.

PUCs play a [crucial role](#) with regards to utility regulator mandates through rate setting and approval, service quality oversight, consumer protection, infrastructure planning and investment, policy development, regulatory compliance and enforcement, and public outreach. Over the past 130 years, [PUC mandates have focused almost exclusively](#) on rate setting, but with the dynamic nature of the energy system today, other factors such as explicit considerations of the public, environment, and equity should be within their purview.

Although PUCs are the main regulators of utilities, legislatures can play a role in regulating by setting directives. [Legislators can mandate](#) PUCs to consider legislative goals such as affordability, equity, reliability, and clean energy. Without legislative action, PUCs may not be able to expand their role.

Additional Resources

- [The Role of State Utility Regulators in a Just and Reasonable Energy Transition](#) | *National Association of Regulatory Utility Commissioners (NARUC)*
- **Rocky Mountain Institute (RMI)** has a [Regulatory Resources Dashboard](#) with relevant research and tools for state public utilities commissioners to decarbonize the grid.
- [State Energy and Environment Guide to Action: Electric Utility Regulatory Frameworks and Financial Incentives](#) | *Environmental Protection Agency (EPA)*

Legislation

- ****Colorado S.B.236** (enacted 2019): Instructs the PUC to approve utilities' Clean Energy Plans only if they found them to be in the public interest including: achieving reductions in carbon dioxide and other emissions, bringing environmental and health benefits, and increasing the reliability and resilience of Colorado's electric system.
- ****Connecticut S.B.7** (enacted 2018): Ties the state's energy strategy, which statutorily guides the decision-making power of the Public Utility Regulatory Authority, to the state's climate targets.
- ****Massachusetts S.9** (enacted 2021): Expands the scope of the Department of Public Utilities to include security, equity, and the reduction of greenhouse gasses.
- **Maine L.D.1682** (enacted 2021): Adds the reduction of greenhouse gas emissions and mitigation of disproportionate energy burdens to the purposes of the Commission and directs the adoption of rules to implement this new purpose.
- **Washington S.B.5116** (enacted 2019): Adds definitions to the public interest objectives for utilities and utility regulators including: equitable distribution of energy benefits and reduction of burdens to vulnerable populations; long-term and short-term public health, economic, and environmental benefits; the retirement of fossil fuels, etc.



Overview

[Performance-based regulation \(PBR\)](#) refers to regulatory frameworks that seek to improve utility [performance by shifting](#) the dynamics around how utilities make money. PBR may build on or supplant traditional based methods of regulation like cost of service regulation (COSR). The [COSR structure](#) allows utilities to increase profits through building out infrastructure, generally fossil fuel, which [can burden consumers with higher costs](#) and makes it more challenging to meet climate goals. Through performance-based regulations, utilities can be [encouraged to improve](#) efficiency, customer service, adopt new technologies, and achieve clean energy goals. These regulations can create a win-win scenario by aligning the financial interests of utilities with societal and state policy goals.

Approaches to Performance-Based Regulation (PBR)

There are four primary components to PBR. However, utilities have co-opted many of these approaches for [their own benefit](#) making it important for legislators to understand and specify how these approaches are used.

- 1. Revenue Decoupling:** Decoupling breaks the link between the amount of energy a utility delivers to customers and the revenue it collects, thus minimizing the utility's incentive to sell more energy. Public Utilities Commissions (PUCs) and [utilities agree on a fixed revenue](#) and then allow rates to change based on energy consumption in order to meet the fixed target.
- 2. Performance Metrics:** Metrics that are [clear and measurable](#) used to monitor and [incentivize performance](#) such as reliability, customer service quality, and energy efficiency.
- 3. Multiyear Rate Plans (MRPs):** [MRPs](#) allow utilities to set rates and revenue targets for multiple years instead of going through an annual rate-setting process.
- 4. Incentives for Underused Practices:** Financial incentives that [encourage utilities to pursue new solutions](#) that they might not normally pursue due to risk.

Legislation

- ****[Connecticut H.B.7006](#)** (enacted 2020): Requires the Public Utilities Regulatory Authority to investigate, develop, and adopt a framework for implementing performance-based regulation of each electric distribution company.
- **[Hawaii S.B.2939](#)** (enacted 2018): Requires the PUC to establish performance incentive and penalty mechanisms that directly tie electric utility revenues to the utility's achievement on performance metrics.
- ****[Indiana H.B.1007](#)** (enacted 2023): Provides that it is the continuing policy of the state that decisions concerning Indiana's electric generation resource mix must take into account the following attributes of electric utility service: (1) reliability, (2) affordability, (3) resiliency, (4) stability, and (5) environmental sustainability. Requires the Indiana Utility Regulatory Commission (IURC) to study performance-based regulations.
- ****[Virginia S.B.966](#)** (enacted 2018): Introduces performance-based regulations to incentivize utilities in Virginia to achieve specific performance targets related to renewable energy deployment, energy efficiency, and grid modernization.
- ****[Washington S.B.5295](#)** (enacted 2021): Transforms the regulation of gas and electrical companies toward multiyear rate plans and performance-based rate making.



Additional Resources

- [Performance-Based Regulation: A Toolkit for Policymakers](#) | *National Association of Regulatory Utility Commissioners (NARUC)*
- [Next-Generation Performance-Based Regulation: Emphasizing Utility Performance to Unleash Power Sector Innovation](#) (Overview) | *Regulatory Assistance Project (RAP)*
- [Next-Generation Performance - Based Regulation Emphasizing Utility Performance to Unleash Power Sector Innovation](#) (Full Report) | *National Renewable Energy Laboratory (NREL)*
- [Performance-Based Regulation: Harmonizing Electric Utility Priorities and State Policy](#) | *National Conference of State Legislatures (NCSL)*



Overview

Publicly owned utilities power [more than 2,000](#) cities and towns, serving more than 48 million people in the United States. The goal for public utilities is to provide customers in the community with safe, reliable, and not-for-profit electricity at a reasonable price.

Since public utilities are owned by and operated for the citizens they serve, policymakers have more power in the decision-making process. Local regulation and governance can help to ensure that utilities reflect the needs and desires of the community.

Key reasons for public power legislation include empowering local control and community ownership, emphasizing public interest and welfare, protecting consumers by ensuring fair rates, ensuring service reliability and resilience, increasing local economic development, and improving public accountability and transparency.



State Highlight: Nebraska

Nebraska provides a unique and interesting case study for the benefits of publicly owned utilities. Nebraska is the [only state in the U.S.](#) where all major electric utilities are publicly owned and governed by boards of directors. The boards of directors are chosen directly by voters, allowing Nebraskans to elect officials that support strong wind and solar development. This has created the ability for the state's utilities to [adopt goals for net-zero carbon emissions](#) from generation resources. With these goals, Nebraska is on track to see large social, environmental, and economic benefits.

Legislation

- ****[Maine L.D.1708](#)** (passed both chambers 2021): Authorizes the replacement of the state's two largest electricity companies with a publicly owned utility.
- **[New York S.4006C](#)** (enacted 2023): Directs the New York Power Authority (NYPA) – the largest state public utility in the country – to build renewable energy projects to help reach the state's climate goals - originally introduced as a [standalone bill](#).

Additional Resources

- **[American Public Power Association \(APPA\)](#)** is a national organization representing community-owned electric utilities in the United States.
- **[Electric Municipal Utilities & the Transition to a Clean Energy Future: A Guide for Municipal Utility Leaders](#)** | *Climate Cabinet Education*
- **[Rural Electric Cooperatives and the Transition to a Clean Energy Future: A Guide for Cooperative Leaders](#)** | *Climate Cabinet Education*



Overview

While utilities will play a large role in the transition away from fossil fuels and towards clean energy, some are fighting against this transition using tools funded by ratepayers. [Utilities have used strategies](#) such as direct spending on legislation, lobbying, trade associations, politically motivated charitable spending and spending on “social welfare” organizations, and public relations and marketing.

To protect customers and reign in utilities, policymakers can utilize rules that will prevent utilities from using ratepayer money for any political activity. Policymakers can also require mandatory disclosures on utilities’ political spending, and can set up explicit enforcement mechanisms including fines for violations.

Strategies

- Pass tighter, updated rules to prevent utilities from using ratepayer money for any political activity.
- Require regular mandatory disclosures that provide greater visibility into utilities’ political spending.
- Set up explicit enforcement programs, including effective fines for violations, to deter utilities from breaking rules.

Legislation

- [Colorado S.B.291](#) (enacted 2023): Prohibits investor-owned utilities from charging their customers for any membership dues in trade associations, legislative lobbying expenses, or any other activities influencing legislation, ballot measures, and other regulatory actions.
- [**Connecticut S.B.7](#) (enacted 2023): Prohibits investor-owned utilities from charging customers for lobbying, trade association dues, public relations expenses, and efforts to argue for rate increases; provides funding for non-utility stakeholders to intervene in proceedings at the Public Utilities Regulatory Authority (PURA).
- [Maine L.D.325](#) (enacted 2023): Prohibits investor-owned utilities from charging customers for lobbying, trade association and chambers of commerce dues, charitable contributions, and public relations expenses.
- [New York S.B.1556](#) (enacted 2021): Prohibits utilities from recovering from customers the costs of any trade associations that engage in any legislative lobbying.

Additional Resources

- [Open Secrets](#) tracks and reports the yearly amount spent by electric utilities on federal lobbying.
- [Getting Politics Out of Utility Bills: How policymakers can protect customers from being forced to fund utilities’ political machines](#) | *Energy and Policy Institute*
- [Strings Attached: How utilities use charitable giving to influence politics and increase investor profits](#) | *Energy and Policy Institute*
- [Can State PUCs Lead in the Clean Energy Transition? Lessons From Six States](#) | *Climate and Development Lab at Brown University*
- [Federal Regulators Urged to End Utility Practice of Funneling Ratepayer Money to Anti-Environment Trade Groups](#) | *Center for Biological Diversity*



Overview

Intervenors are parties who engage in utility policy

proceedings that involve important decisions regarding utility rates, policies, infrastructure investments, or other significant matters. Traditionally, utilities are able to hire attorneys and expert consultants to support their position in regulatory proceedings whereas other stakeholders, such as customers or civil society organizations, might not have the economic resources needed to intervene in proceedings to protect their interests. It is important to ensure stakeholder participation in these proceedings, because utilities typically argue for matters that involve an increase in costs to ratepayers.

Intervenor compensation is a mechanism designed to support active participation by consumer stakeholders in utility policy proceedings. This mechanism is typically a program designed to offer individuals or organizations that actively participate in utility proceedings with financial support or reimbursement. It is designed to offset the costs associated with intervenor participation and facilitate meaningful engagement in regulatory processes. As of 2021, 16 states have an authorized intervenor compensation program in statute or administrative code.

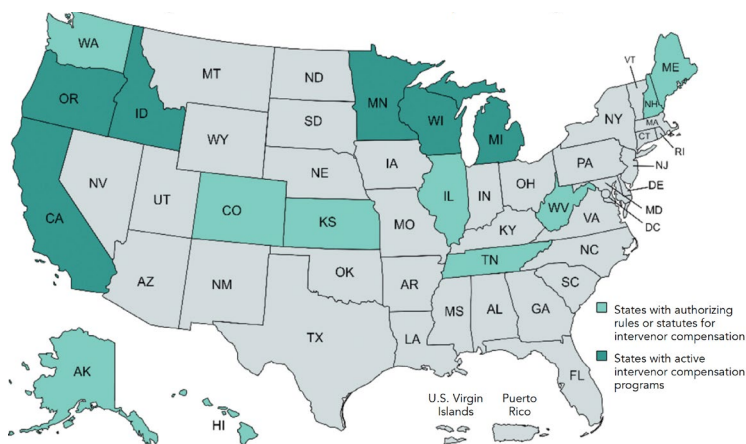


Figure 2: State Status for Intervenor Compensation Programs as of December 2021.
Source: National Association of Regulatory Utility Commissioners (NARUC) ([original](#)).

Legislation

- **California S.B.512** (enacted 2016): Expands intervenor compensation provisions to enhance public participation in utility regulatory proceedings by providing financial support to eligible intervenors.
- **Illinois S.B.2408** (enacted 2019): Provides for a Consumer Intervenor Compensation Fund ("CICF") to support participation including lay or expert testimony concerning the expenses, investments, rate design, rate impact, or other matters.
- ****Oregon H.B.2475** (enacted 2021): Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates.
- ****Michigan S.B.437** (enacted 2016): Creates intervenor compensation program and the only program that is independent of its state commission (Michigan Public Service Commission).

Additional Resources

- **State Approaches to Intervenor Compensation** | National Association of Regulatory Utility Commissioners (NARUC)
- **Low Income Solar** put together a **policy guide** on the varying state intervenor compensation



Overview

Currently, the U.S. has immense congestion along transmission lines and lacks transmission capacity, especially in the case of integrating clean energy resources. This leads to the inability to deliver electricity from current and projected clean energy resources. Also, the regions where clean energy resources are vast, are [often far from cities and the existing grid](#), meaning there needs to be thousands of miles of new high-voltage transmission lines built. There is no single entity for organizing the grid and transmission lines often require extensive permitting and approval of multiple regional authorities.

State legislators can play a crucial role in long-term transmission planning, strengthen ties between regions, and propose new legislation for transmission development.

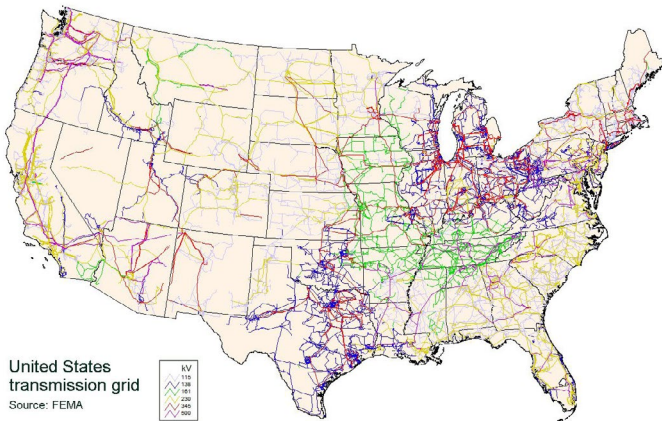


Figure 3: United States Electric Transmission and Distribution Network.
Source: FEMA ([original](#)).

Legislation

- [Colorado S.B.16](#) (enacted 2023): Requires the Public Utilities Commission to consider the need for the expansion of transmission capacity in the state and for local governments to expedite reviews of land use applications regarding transmission lines.
- [Maryland H.B.88](#) (enacted 2022): Establishes state policy goals regarding electric distribution; requires efforts to support and pursue federal funding for system upgrades; and establishes labor standards for certain projects.
- ****[New Mexico H.B.233](#)** (enacted 2020): Directs the Energy, Mineral, and Natural Resources Department to develop a roadmap for grid modernization; creates a grant program funded by the state treasury for municipalities, agencies, schools, and Indian tribes to pursue grid modernization projects. New Mexico also has a [Renewable Energy Transmission Authority](#) and you can find more information [here](#).
- ****[Washington S.B.5165](#)** (enacted 2023): Creates a coordinated permitting process across all state and local permitting and review agencies.

Additional Resources

- [Why Transmission Matters](#) | *Americans for a Clean Energy Grid*
- [Transmission Planning and Development Regional Report Card](#) | *Grid Strategies*



What is an RTO?

Regional Transmission Organizations (RTOs) or Independent System Operators (ISOs) are one type of wholesale energy market in the US. They oversee the generation, transmission, resource adequacy, and reliability functions of the grid. An RTO enables individual operators of different generation sources, such as wind farms or solar arrays, to submit offers to run their electricity to power the grid on a competitive basis.

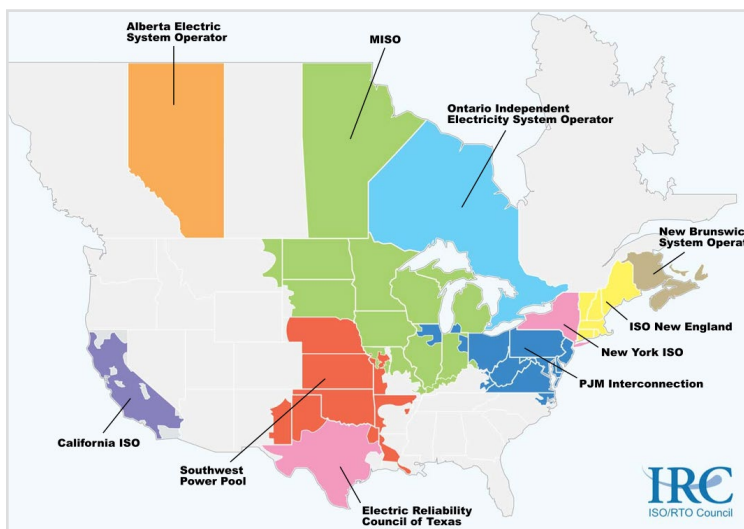


Figure 4: Map of RTOs nationwide. Areas in gray do not contain RTOs or ISOs and are currently run under bilateral markets. Source: EIA ([original](#)).

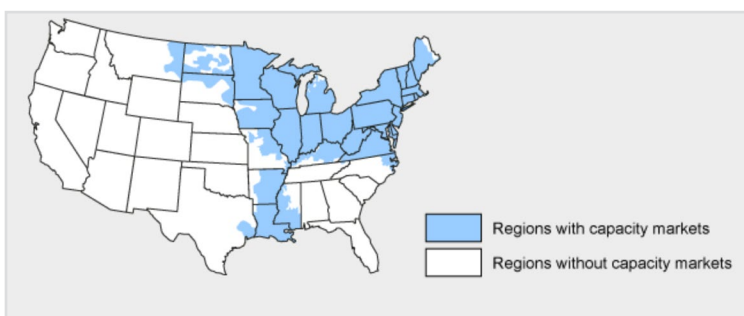


Figure 5: The areas in the United States with Capacity Markets. This area encompasses the regions covered by the RTOs PJM, ISO-NE, NYISO, and MISO. Source: FERC ([original](#)).

Why should legislators pay attention to their RTO?

Regional Transmission Organizations can have positive impacts on the reliability, resilience, affordability, and cleanliness of the grid.

- **Keeping Rates Stable:** Geographic variability allows RTOs to help sunnier states access renewable electricity from a more windy state and vice versa.
- **Reliability During Extreme Weather:** During major weather events, utilities can experience blackouts and increased demand. With expanded transmission, regions can [broaden the pool of available resources](#), making the grid more reliable, affordable, and efficient, particularly during extreme weather events.
- **Capacity Markets:** Some RTOs operate [capacity markets](#), which are used to identify the types of resources used for peak electricity demand longer term (see Figure 5). If state legislators are creating policies to promote renewables or reduce pollution in environmental justice communities, it is important to ensure the capacity market is not working counter to their interests by propping up fossil fuels.
- **Opportunity for New RTOs:** Currently, the West and Southeast do not have RTOs. There is vast opportunity to create RTOs for both the West and Southeast that are regionally focused and contribute to more reliable, efficient, and affordable energy.

Continue to next page for legislation and additional resources related to Regional Markets.



Legislation

- ****Colorado S.B.072** (enacted 2021): Requires transmission utilities to join an organized wholesale market by 2030 and modernize the state's electricity grid system.
- **Nevada S.B.448** (enacted 2021): Accelerates construction of a massive transmission project and requires that the state join a regional transmission organization by 2030.
- ****South Carolina H.4940** (enacted 2020): Forms a committee to investigate a range of market-based reforms, including participation by SC utilities in a statewide or regional [wholesale market](#).

Additional Resources

- [What are Regional Transmission Organizations and How do They Interact with State Climate Goals?](#) | *National Caucus of Environmental Legislators (NCEL)*
- **The Federal Energy Regulatory Commission (FERC)** has [extensive information on RTOs](#) on their website.
- [In Support of Western Regional Resource Transmission Planning Coordination](#) | *Center for New Energy Economy (CNEE) at Colorado State University*
- [Market Reforms Can Power the Energy Transition in PJM](#) and [MISO](#) | *ACORE*
- [Assessment of Potential Market Reforms for South Carolina's Electricity Sector](#) | *The Brattle Group*

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