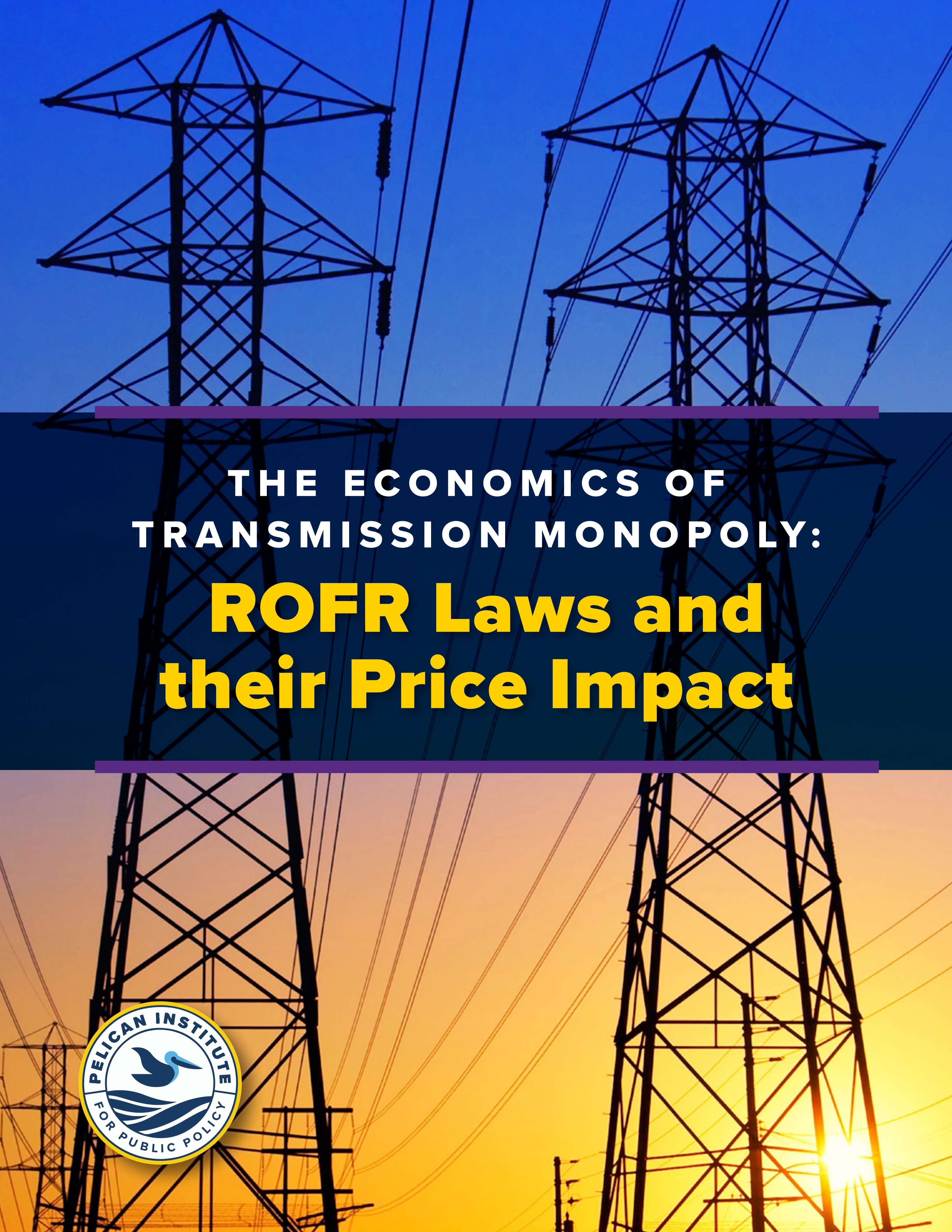
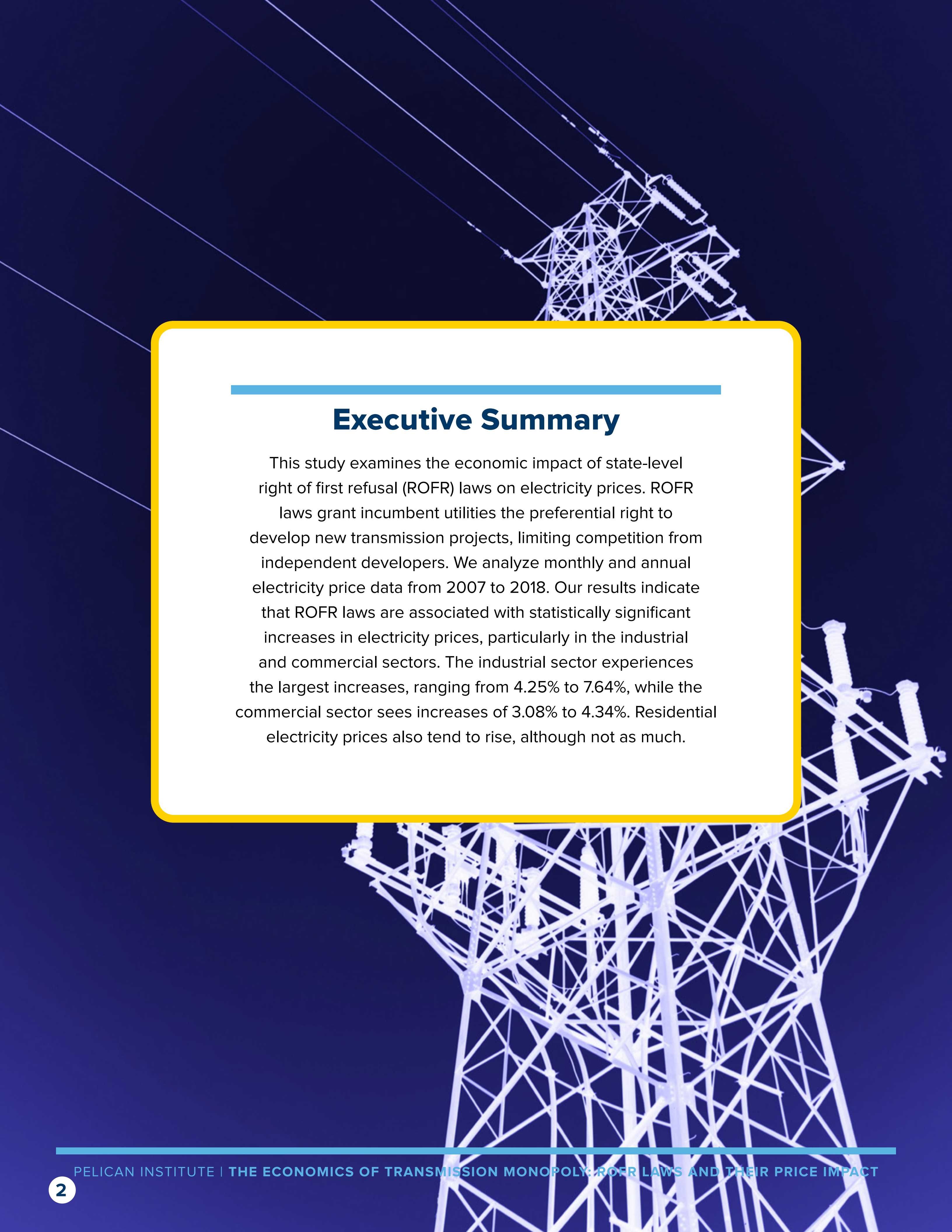


THE ECONOMICS OF TRANSMISSION MONOPOLY: ROFR Laws and their Price Impact

PELICAN INSTITUTE FOR PUBLIC POLICY



Executive Summary

This study examines the economic impact of state-level right of first refusal (ROFR) laws on electricity prices. ROFR laws grant incumbent utilities the preferential right to develop new transmission projects, limiting competition from independent developers. We analyze monthly and annual electricity price data from 2007 to 2018. Our results indicate that ROFR laws are associated with statistically significant increases in electricity prices, particularly in the industrial and commercial sectors. The industrial sector experiences the largest increases, ranging from 4.25% to 7.64%, while the commercial sector sees increases of 3.08% to 4.34%. Residential electricity prices also tend to rise, although not as much.

Introduction

State-level right of first refusal (ROFR) laws, which give incumbent utilities the preferential right to develop new transmission projects, have increasingly shaped electricity transmission investment in the United States. These laws emerged in response to the Federal Energy Regulatory Commission's (FERC) Order 1000, which sought to increase competition by removing federal ROFR protections for incumbent utilities (FERC, 2011). FERC removed federal ROFR protections because they "have the potential to undermine the identification and evaluation of a more efficient or cost-effective solution to regional transmission needs, which in turn can result in rates … that are unjust and unreasonable or otherwise result in undue discrimination by public utility transmission providers" (FERC, 2011). In short, FERC removed ROFR to make electricity transmission cheaper and more efficient.

In the aftermath of this regulatory shift, multiple states enacted their own ROFR laws (see, for example, Minnesota Legislature, 2012; Michigan Legislature, 2021; Indiana General Assembly, 2023). Proponents argue that these laws safeguard local jobs, maintain grid reliability, and leverage the expertise of established utilities (Bruggers, 2023). Critics, however, contend that ROFR laws stifle competition, drive up costs, and lead to inefficient infrastructure investments (Pelican Institute, 2024; Pfeifenberger, Chang, & Hagerty, 2021).

The economic consequences of ROFR laws remain a subject of debate. While supporters claim these policies prevent unnecessary regulatory hurdles and provide continuity in transmission development, emerging evidence suggests that they lead to higher costs (Pelican Institute, 2024; Lucas, 2025). By granting exclusive rights to incumbents, ROFR laws limit competitive bidding and reduce incentives for cost minimization and innovation. These inefficiencies can translate into higher electricity prices for consumers. Moreover, legal challenges in states such as Texas and Iowa highlight the contentious nature of ROFR laws, with courts ruling that these policies violate principles of fair competition (Kleckner, 2023; Kauffman, 2023).

This study employs a rigorous approach to assess the impact of ROFR laws on electricity prices. We analyze data spanning multiple states and time periods and isolate the effect of ROFR policies from other market factors. By looking at monthly and annual electricity price data from 2007 to 2018, we aim to provide robust evidence on the consequences of these laws. Our findings indicate that ROFR laws are associated with price increases across all consumer sectors, particularly in the industrial and commercial sectors.

Overview of Right of First Refusal (ROFR) Laws

State-level right of first refusal (ROFR) laws have emerged as a legislative response to FERC Order 1000, which sought to introduce competition into electricity transmission planning by removing federal ROFR protections for incumbent utilities.

Minnesota, North Dakota, and South Dakota were among the earliest adopters of state-level ROFR laws, passing their statutes in 2011 and 2012 in response to federal deregulation. These laws shield local utilities from competition, allowing them to exercise first rights over new projects connecting to their existing infrastructure. Over the next decade, other states followed suit, with Nebraska and Oklahoma implementing ROFR protections in 2013, Alabama in 2015, Montana in 2017, and Texas in 2019.

By the early 2020s, a new wave of ROFR legislation spread across states with utilities concerned about competitive bidding processes for new transmission investments. Iowa (2020), Michigan (2021), Indiana (2023), and Mississippi (2023) each passed ROFR laws ensuring that incumbent transmission owners retained development rights for infrastructure expansions. These laws were often championed by local utilities and affiliated trade groups, who argued that ROFR protects local jobs, ensures reliability, and leverages incumbent expertise (Bruggers, 2023). However, critics contend that ROFR laws increase costs, stifle competition, and ultimately raise electricity prices for consumers (Pelican Institute, 2024; Pfeifenberger et al., 2021).

While most state ROFR laws remain intact, some have faced legal challenges. The Texas ROFR law (2019) was struck down by the U.S. Court of Appeals for the Fifth Circuit, which ruled that it violated the dormant commerce clause by discriminating against out-of-state firms (Kleckner, 2023). Similarly, Iowa's 2020 ROFR law was blocked by the Iowa Supreme Court, which described the statute as "quintessential crony capitalism" and ruled that it had been improperly passed through legislative logrolling (Kauffman, 2023). In contrast, Minnesota's ROFR statute survived judicial scrutiny in LSP Transmission Holdings v. Sieben (2020), where the Eighth Circuit Court upheld the law, arguing that it did not place an undue burden on interstate commerce.

As the legal landscape evolves, state-level ROFR policies remain contentious, with ongoing debates about their economic implications. Empirical analyses suggest that these laws lead to higher electricity costs, as utilities tend to engage in less cost-efficient transmission planning (Pfeifenberger et al., 2021). Last year, we pointed to Minnesota as a case study in how ROFR can raise costs. Electricity prices in Minnesota have trended higher than neighboring Wisconsin, which does not enforce ROFR protections (Pelican Institute, 2024).

Because the electricity grid is interconnected, the impact of ROFR laws extends beyond state borders, affecting regional electricity markets and interstate transmission planning efforts. Costs related to ROFR policies likely spillover into neighboring states and beyond.

The Economic Impact of ROFR Laws

ROFR policies eliminate competition in the electricity transmission sector. Incumbent utilities and their allies argue that these policies promote stability by protecting local jobs, maintaining long-term relationships with stakeholders, and leveraging the expertise of existing service providers. However, by excluding independent transmission developers from bidding on new projects, ROFR laws restrict competition and lead to inefficiencies in transmission investment. Incumbents have little incentive to minimize costs, optimize infrastructure development, or innovate to improve the grid (Rossi, 2023).

The inefficiencies associated with ROFR policies are evident in transmission cost disparities between competitive and non-competitive projects. A study found that competitively developed transmission projects resulted in 37% cost savings, while similar non-competitive projects experienced cost increases of 18% (Lucas, 2025). These findings suggest that removing competition leads to higher transmission costs, which consumers ultimately pay in the form of increased electricity rates.

This dynamic is particularly pronounced in states where utilities operate under cost-of-service regulation, a framework that allows utilities to recover their costs plus a guaranteed rate of return from ratepayers. Under this model, higher project costs can translate into higher profits for the utility, as larger capital expenditures lead to a larger rate base to calculate returns. This incentivizes utilities to favor costlier projects (Rossi, 2023).

In addition to higher costs, ROFR laws contribute to regulatory capture, as utilities leverage their influence to shape policies in their favor. This manifests in extensive lobbying efforts to preserve or expand ROFR protections. The cost of these lobbying efforts diverts resources that could be used to improve transmission infrastructure or integrate renewable energy sources. Furthermore, legal uncertainty surrounding ROFR laws—exemplified by court rulings in Iowa and Texas striking down state ROFR provisions—adds to the instability of long-term transmission planning (Kauffman, 2023; Kleckner, 2023).

The anti-competitive nature of ROFR laws also stifles innovation. Independent developers often introduce cost-containment mechanisms, alternative financing structures, and advanced grid technologies, but their exclusion under ROFR policies prevents these efficiency gains from reaching the market. Competitive bidding has been shown to produce transmission cost savings of 20% to 30% while encouraging technological improvements (Rossi, 2023).

The consequences of ROFR laws extend beyond individual states and impact regional energy markets. Many states with ROFR policies participate in multi-state transmission networks, such as the Midcontinent Independent System Operator (MISO) region, where inconsistent ROFR laws complicate infrastructure development and increase costs across the grid (FERC, 2011). Empirical evidence suggests that competitive transmission development leads to lower costs, improved efficiency, and a more resilient electricity grid.

The Estimated Cost of ROFR Policies

This section presents estimates of the impact of state ROFR policies on electricity prices. We estimate the impact across all sectors together, and the industrial, commercial, and residential sectors separately. Further details of the methodology can be found in the Technical Appendix at the end of the paper.

Table 1 illustrates the set of states that have passed ROFR policies since FERC Order 1000 and the years corresponding to the passage of each state's policy. The highlighted states represent the sample of states used in our analysis. We use a sample electricity prices from 2007 to 2018 collected from the Energy Information Administration (EIA). We estimate the impact using monthly data and annual data. The annual data allows us to control for relative electricity generation capacity from natural gas, coal, and wind across the states in the sample over time. We also estimate the impact without Texas, Iowa, or New Mexico as the former two states ROFR policies were eventually disrupted by courts, and New Mexico is less interconnected with MISO relative to other states in the sample.

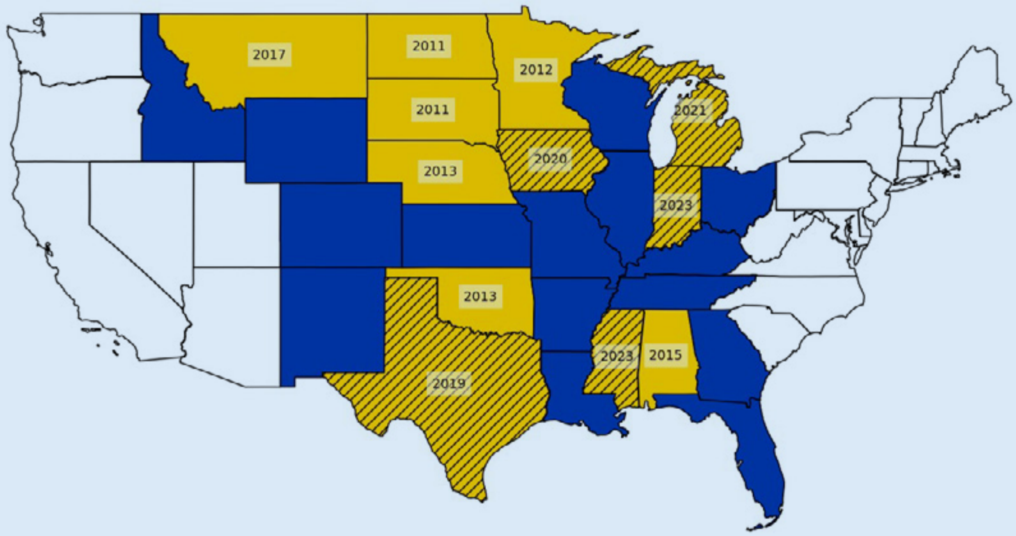
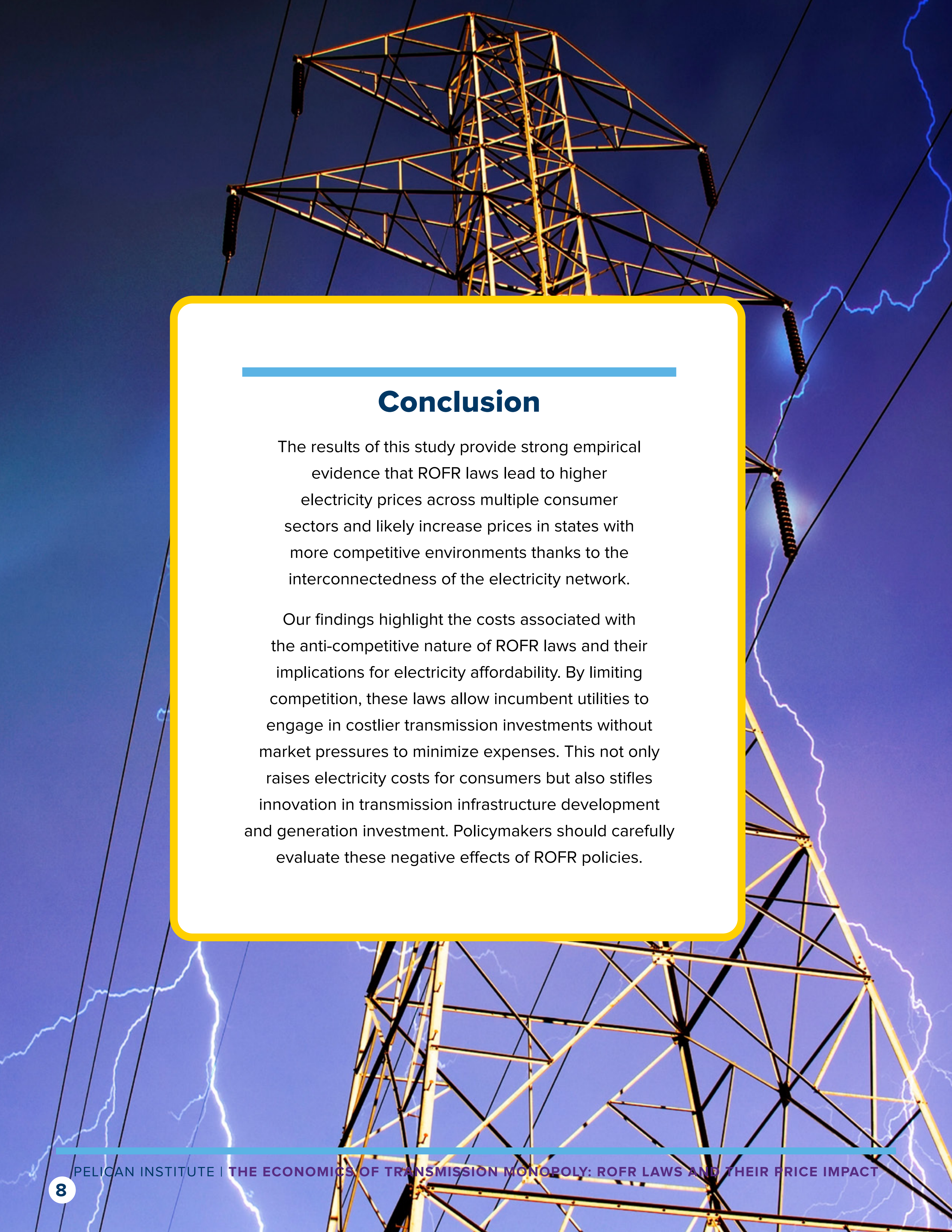


Figure 1. Sample states for estimating the impact of ROFR policies on electricity prices. Blue states never enacted state ROFR. Yellow states eventually enacted. Shaded states did not yet enact ROFR in the sample (2007 to 2018).

Indiana, Iowa, Michigan, Mississippi, and Texas are shaded in Figure 1 because they passed ROFR in the indicated years after our sample period, so those states serve as control rather than treatment states in the main analysis. This is a feature of the analysis, as a driving assumption is that control states have a similar propensity to pass the legislation as treatment states, which is clearly true for this set. Expanding the sample after 2018 requires one to make the decision of whether Texas and Iowa should be treated as control states, and potentially introduces issues related to other confounding events especially related to the COVID-19 pandemic.

We find that state-level ROFR policies increased electricity prices across all sectors by between 2.46% and 3.89%. Businesses incur the largest price increases from ROFR policies: we find that ROFR policies increase industrial electricity prices by between 6.21% and 7.64% and increase commercial prices by between 3.08% and 4.34%. Residential consumers pay between 1.45% and 3.12% more as a result of state ROFR policies on average. The majority of these results are statistically significant at the 1% level. The only exceptions are in the annual sample that controls for generation capacity. In that sample, the 1.45% estimated increase for the residential sector and 2.64% estimated increase across all sectors are not statistically significant, while the 3.08% estimated increase for the commercial sector is significant at the 10% level. The fact that the commercial and industrial estimates remain statistically significant in the annual sample emphasizes the outsize impact of ROFR policies on business consumers. An expanded discussion of these results is available in the Technical Appendix.



Conclusion

The results of this study provide strong empirical evidence that ROFR laws lead to higher electricity prices across multiple consumer sectors and likely increase prices in states with more competitive environments thanks to the interconnectedness of the electricity network.

Our findings highlight the costs associated with the anti-competitive nature of ROFR laws and their implications for electricity affordability. By limiting competition, these laws allow incumbent utilities to engage in costlier transmission investments without market pressures to minimize expenses. This not only raises electricity costs for consumers but also stifles innovation in transmission infrastructure development and generation investment. Policymakers should carefully evaluate these negative effects of ROFR policies.

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Technical Appendix

To evaluate how state-level Right of First Refusal (ROFR) laws affect electricity prices, we employ a two-way fixed effects difference-in-differences (DiD) framework. This model helps isolate the impact of ROFR enactment by controlling for unobserved, time-invariant differences across states (through state fixed effects) and for common shocks affecting all states in a given period (through time fixed effects) (Wing et al., 2018).

DATA

We use monthly and annual data on electricity prices from 2007 to 2018, focusing on the midcontinent of the United States (see Figure 1). To allow for flexibility in how we measure effects across sectors, we examine the natural log of electricity prices for all sectors combined and separately for each sector (commercial, residential, and industrial). The use of the natural log transforms price levels to permit the interpretation of the coefficient on ROFR as an average percentage change in prices resulting from the ROFR policy. In choosing the 2007 to 2018 window, we capture a balanced before-and-after picture for states that enacted ROFR laws early, while also treating states such as TX, IA, MI, and IN as controls prior to their laws taking effect.

The sample primarily consists of states within the Midcontinent Independent System Operator (MISO) region, ensuring that differences in electricity prices are not driven by variations in transmission system governance. By focusing on states in the midcontinent, the analysis controls for regional electricity market dynamics and avoids confounding effects from fundamentally different regulatory or market structures. Additionally, the selection includes a mix of treatment and control states with comparable electricity consumption patterns and sectoral distributions, helping to isolate the impact of Right of First Refusal (ROFR) laws. The mix of control and treatment states exhibit similar industrial and residential electricity demand profiles and comparable weather patterns. The similarities across control and treatment states helps ensure that our results are not driven by confounding factors.

Indiana, Iowa, Michigan, Mississippi, and Texas are shaded in Figure 1 because they passed ROFR in the indicated years after the sample period, so those states serve as control rather than treatment states in the analysis. This is a feature of the analysis, as a driving assumption is that control states have a similar propensity to pass the legislation as treatment states, which is clearly true for this set.

In the baseline analysis with monthly data, we estimate:

$$ln(P_{it}) = \alpha + \delta ROFR_{it} + \lambda_i + \gamma_t + \epsilon_{it}$$

where $ln(P_{it})$ is the electricity price in state i at time t, $ln\, ln\, (\cdot)$ denotes the natural logarithm, $ROFR_{it}$ is a treatment indicator that equals 1 if a ROFR law is in effect in state i at time t and 0 otherwise, λ_i denotes state fixed effects, γ_t denotes time fixed effects (month or year dummies), and ϵ_{it} is a mean-zero error term.

In the annual specification, we add generation capacity control variables. In this case, the model can be written as:

$$ln(P_{it}) = \alpha + \delta ROFR_{it} + \beta_1 RelGasCap_{it} + \beta_2 RelCoalCap_{it} + \beta_3 RelWindCap_{it} + \lambda_i + \gamma_t + \epsilon_{it}$$

where $RelGasCap_{it}$, $RelCoalCap_{it}$, and $RelWindCap_{it}$ represent the proportions of a state's total generation capacity attributable to natural gas, coal, and wind, respectively. Including these capacity variables helps control for factors influencing electricity prices beyond ROFR policy. However, if ROFR itself shapes the generation mix over time, it may introduce a potential bias by capturing part of the policy’s effect on those capacity variables. The generation capacity control variables represent the relative capacity of natural gas plants, coal plants, and wind turbine plants across these states, i.e., the total capacity of that source divided by the total capacity of all sources. The selections of natural gas, coal, and wind is based on visual comparison of generation capacities across the states in our sample to determine which types of generation capacity were important to include as control variables.

We estimate these equations on prices for all sectors together and separately for commercial, residential, and industrial sectors. The logarithmic transformation in all cases has the advantage of interpreting the policy coefficient δ as the approximate percent change in electricity prices associated with ROFR adoption. Logs also help stabilize variance and reduce heteroskedasticity in price data.

We also ran models excluding TX, IA, and NM due to ongoing legal challenges and the fact that TX and NM are not as interconnected with MISO as other states in the sample.

All data for this analysis was collected using the U.S. Energy Information Administration (EIA) API. The EIA API allows for retrieval of monthly and annual electricity prices across all sectors, as well as detailed capacity data for different generation sources, ensuring consistency in measurement across states and time periods (EIA, 2024).

RESULTS

Table 1 presents the estimated impact of right of first refusal (ROFR) laws on electricity prices across different sectors and samples. The results indicate that ROFR laws are generally associated with higher electricity prices to a degree that is usually statistically significant. The estimated effects vary by sector, with the industrial sector experiencing the largest price increases, followed by the commercial sector, while the residential sector sees more modest effects.

For the industrial sector, ROFR enactment is associated with electricity price increases ranging from 6.21% to 7.64%. These estimates are statistically significant in every sample, highlighting a strong relationship between ROFR laws and industrial electricity costs. The commercial sector also experiences meaningful increases, with estimates ranging from 3.08% to 4.34%. These effects are statistically significant in most cases. This suggests that businesses bear higher costs following the implementation of ROFR laws. Because businesses tend to be sensitive to energy prices, this has broader economic implications.

The residential sector shows smaller estimated effects, but two out of three samples still show statistically significant price increases. The estimated price increases range from 1.45% to 3.12%. The weaker effects in the residential sector suggest that ROFR policies may have a more limited impact on household electricity prices compared to industrial and commercial consumers. This is not surprising, as state public utility commissions tend to be more protective of residential consumers than industrial or commercial consumers.

The consistency of significant results in Table 1 supports the conclusion that ROFR laws contribute to higher electricity prices across all sectors. Further, the results in Table 1 likely underestimate the impact of ROFR policies for two reasons: most of the states in the sample are in MISO, so higher costs associated with ROFR policies in treatment states are likely to spill over into control states; and ROFR policies likely lead to inefficient generation capacity investment and employment, so when we control for generation, we dampen the estimated overall impact of ROFR policies on electricity prices.

Table 1. Estimated impacts of ROFR laws on electricity prices. ROFR impact estimates in bold.

	Monthly (2007 to 2018)	Annual (2007 to 2018)	Monthly (2007 to 2018) w/out IA, NM, TX
All Sectors			
ROFR Active	**0.0389*** **	**0.0246**	**0.0269*** **
Sample Size	3890	238	3457
R-Squared	0.791	0.848	0.8253
Commercial			
ROFR Active	**0.0434*** **	**0.0308* **	**0.0343*** **
Sample Size	3887	238	3456
R-Squared	0.762	0.828	0.804
Industrial			
ROFR Active	**0.0764*** **	**0.0647** **	**0.0621*** **
Sample Size	3888	238	3456
R-Squared	0.615	0.636	0.655
Residential			
ROFR Active	**0.0312*** **	**0.0145**	**0.0222*** **
Sample Size	3887	238	3455
R-Squared	0.8362	0.9122	0.859
Gen Controls?	No	Yes	No

**indicates significance at the 10% level, **at the 5% level, and ***at the 1% level.*

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