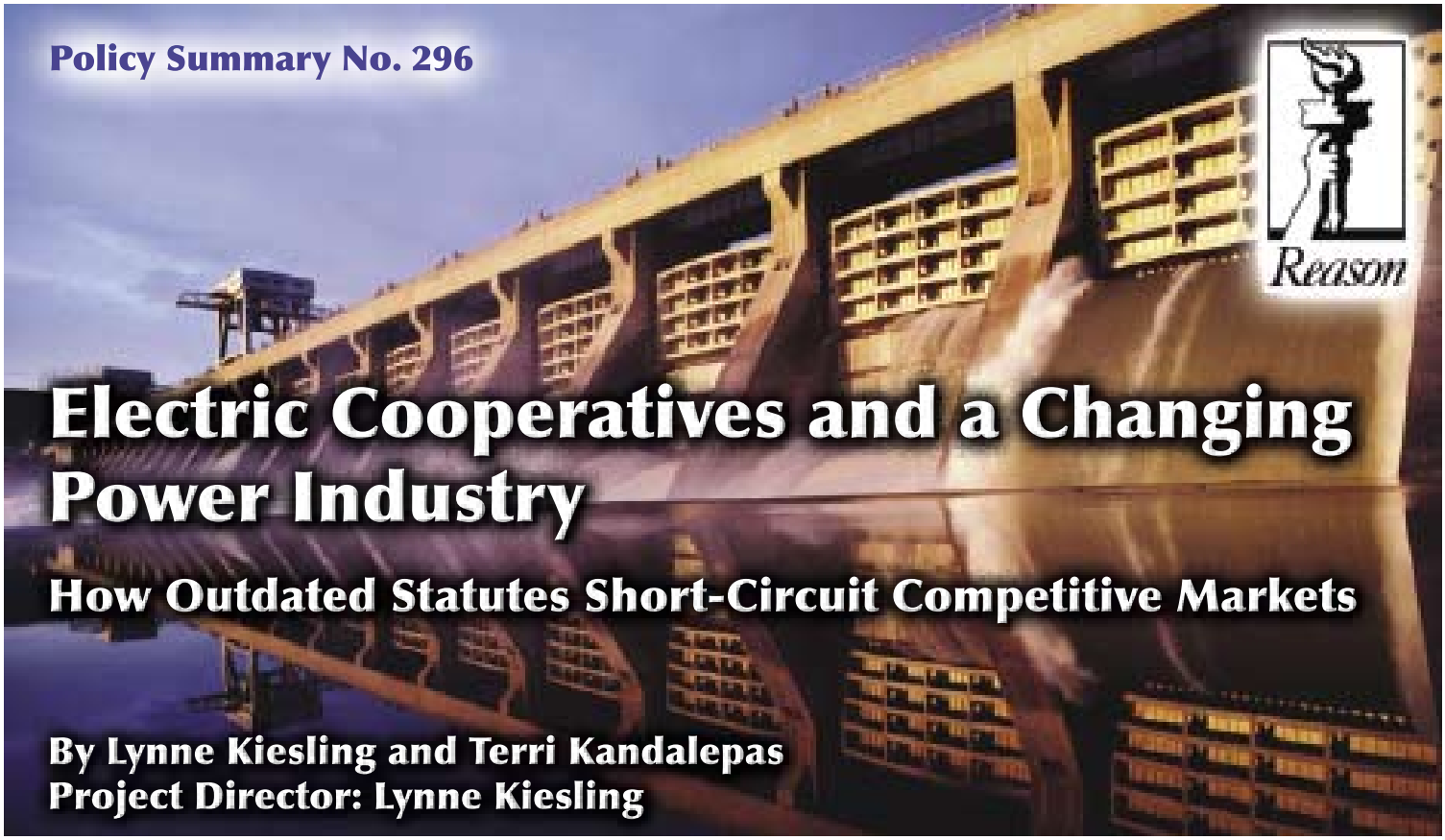

Policy Summary No. 296

Electric Cooperatives and a Changing Power Industry

How Outdated Statutes Short-Circuit Competitive Markets

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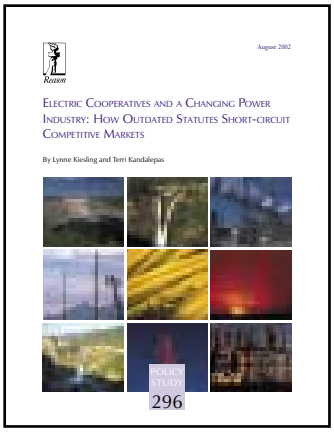
Introduction

Over half of U.S. states have initiated electricity restructuring, and, while the pace of change has been delayed by the recent California experience, most of the rest will follow over time. Most attention has gone to restructuring investor-owned utilities, but cooperatives can play a role in a competitive electricity industry. However, the existing legal, tax and regulatory differences between cooperatives and investor-owned utilities give cooperatives subsidies that are at odds with a restructuring industry and the benefits of competition. Subsidies distort the resource allocation signals that create efficiency when pricing and investment decisions occur through markets.

In this dynamic environment, electric cooperatives have evolved in directions that no longer reflect the original objectives of the Rural Electrification Act of 1936 (RE Act). Cooperatives have been entrepreneurial in finding new business opportunities during ongoing electricity restructuring and the advent of competition in electricity. Thus cooperatives today are very different types of businesses than they were in 1936. Economic dynamism and adherence to the original principles of cooperatives are not mutually exclusive, but they do raise some public policy issues because of the differential legal, tax and regulatory treatment of cooperatives.

In this study we argue that much of the decades-old public policy governing electricity cooperatives has become obsolete due to changes in technology, incomes and demographics in the American economy. Cooperatives are seizing opportunities to make the most of burgeoning competition, but they still argue for being treated more favorably than other private companies. We focus on three particular policies: tax exemption, loan subsidies and guarantees, and preference in purchasing power from federal generators. These policies, relics of the rural electrification movement, are not suited to a competitive environment.

This is a summary of *Variable-rate or "Pay-as-you-throw" Waste Management*, Policy Study No. 296, August 2002, www.rppi.org/ps296.html.



Although still subject to certain state revenue taxes, electricity cooperatives are exempt from many federal and state taxes to which for-profit businesses are subject, including investor-owned utilities. However, the economic reasons underlying those exemptions have changed.

- As cooperatives become more entrepreneurial, their business models evolve away from those that provided the original rationale for tax exemption.
- In addition, as cooperatives serve markets that are less and less rural and tend to have higher incomes (such as suburbs), taxpayers not served by cooperatives essentially subsidize the members of cooperatives as a result of this tax exemption.
- In cases where the cooperatives' markets have higher incomes relative to, for example, urban customers of investor-owned utilities, this tax exemption serves as income redistribution to higher-income individuals.

This tax exemption policy is inequitable, inefficient and distortionary, and should be revised in light of recent market and technological changes.

Electricity cooperatives can also use the Rural Utilities Service (RUS) to borrow at interest rates below market rates, and the RUS provides loan guarantees that enhance the credit ratings of cooperatives. In addition, the evolution of many cooperatives has included their not returning equity to members as they are supposed to according to cooperative principles. That equity access makes cooperative investment and expansion easier and cheaper than it is for investor-owned utilities (IOUs) and other taxable corporations.

Cooperatives (and municipal utilities) also receive low-cost, subsidized power generated from federally-owned sources preferentially. As in the case of tax exemption, this preference acts as a subsidy to the cooperatives' members, which is both distortionary and redistributive.

The unfortunate result of these biases is inequitable taxpayer subsidies of cooperatives and their members and customers; while all taxpayers fund these activities, only a small proportion of the U.S. population enjoys the benefits accruing to cooperatives from these biases and subsidies. This fact has become more apparent over the past three decades, during which time many observers have wondered if the Rural Electrification Administration/Rural Utilities Service has distorted economic outcomes and outlived its usefulness, and if public policy toward cooperatives should change.

Historical Background

Since the establishment of the RE Act and the Internal Revenue Code, rural life in America and electric cooperatives have changed significantly. Initially, cooperatives were very small associations that lacked financial resources, and they purchased and distributed electricity to their members in sparsely populated regions. Before the passage of the RE Act, they were limited by the prohibitive costs associated with building electrical lines and facilities. With the infusion of capital by the federal government, by 1950 almost 1,000 electric cooperatives had received loans from the REA. The 1950s were a time of rural development, and consequently electric cooperatives experienced a rapid growth in demand for electricity.

Furthermore, between 1960 and 1981, the sales of electricity by cooperatives increased from 25.4 million to 186.5 million megawatt-hours, which represents an average annual growth rate for REA-funded borrowers that was 50 percent higher than that of the overall electric utility industry. By 1965, 98 percent of farms in the United States had electric service, 51 percent of which received their electricity from cooperatives. It seemed that much of the original purpose of the REA had been achieved.

As electricity service became more evenly distributed, the REA began making loans to generation and transmission (G&T) cooperatives. These cooperatives generate and sell electricity to their members, which are distribution cooperatives. Changes to the criteria for granting REA loans to G&T cooperatives in 1961 made it easier to fund the construction of power plants and that are exempt from federal income taxes with loans from the federal government that charged lower interest rates. By 1981, cooperatives were generating approximately 77.2 million megawatt-hours of electricity, which was the equivalent of about 52 percent of their total requirements. This expansion represents a movement towards the vertical integration of electric cooperatives (at least through contracting if not through pure vertical integration), and it indicates that cooperatives has deviated from their original purpose of distributing electricity reliably in rural areas with a low population density.

Business Models of Cooperatives Have Evolved

Cooperatives have also diversified their target markets, expanding to serve customers that are not cooperative members. For example, Northern Virginia Electric Cooperative serves a part of the Washington, DC metropolitan area that has been urbanizing rapidly over the past decade. Beginning in 1997, the cooperative established a marketing subsidiary to sell satellite television services to residents in northern Virginia and the District of Columbia. Such results indicate that cooperatives business activities have extended beyond their original mission and beyond their members and owners. Indeed, their business models and new customer outreach make them look and operate increasingly like IOUs.

One lingering feature of the RE Act is that once a community is deemed REA-eligible, it retains that eligibility even if the demographics of the area change. A 1998 GAO study found that most borrowers between 1994 and 1997 served communities of 5,001 to 25,000 customers, and some loans did go to cooperatives with more than 100,000 customers. Only 26 electricity borrowers (6%) between 1994 and 1997 served 2,500 or fewer customers, which is the current population threshold for being considered a rural community. Metropolitan statistical areas with a population greater than one million that are served by rural electric cooperatives include:

- Northern New Jersey – New York – Long Island
- Philadelphia – Wilmington
- Pittsburgh
- Washington – Baltimore
- Atlanta
- Detroit – Ann Arbor – Flint
- St. Louis
- Dallas – Ft. Worth

Even if a cooperative no longer borrows funds from the RUS, its cooperative status continues to qualify it for tax exemption and federal preference power purchases. These characteristics decrease the operating costs and capital costs of the cooperative, even if the area in which it is located is a resort area or has a high average household income. As the table (on the next page) indicates, several cooperatives serve resort areas where median household incomes are relatively high, particularly in comparison to cities, which are typically not served by rural electric cooperatives. While these data are not exhaustive or necessarily representative of all cooperatives, they suggest that cooperatives in some areas serve populations that have relatively high incomes, while IOU customers (and municipal customers, in the case of Los Angeles) in cities pay more for electricity and have relatively lower incomes.

Thus in some cases the persistence of subsidies to cooperatives redistribute income from low-income communities to higher-income communities, because the regulatory treatment of cooperatives has not evolved as the communities they serve have changed.

Over the past decades, electric cooperatives have gone well beyond their original mission of rural electrification, and the RUS has encouraged this mission shift to more general infrastructure issues. Cooperatives have also started competing with for-profit private companies in commercial ventures unrelated to the provision of electricity. While this innovation and entrepreneurship is good for the cooperatives' customers, we must consider whether continuing to subsidize these increasingly commercial operations is a cost-effective use of taxpayer money.

Differential Tax Treatment of Cooperatives

Electric cooperatives are considered tax-exempt nonprofit organizations under Internal Revenue Code 501(c)(12). Electric cooperatives are exempt from corporate income tax, other federal taxes, and state and local income taxes as long as 85 percent of their income is derived from serving their members.

Tax exemption affects cooperative utilities in several ways. First, gross income from serving members is tax-free income. In addition, the 85 percent rule enables cooperatives to earn 15 percent of their income from serving non-members, yet not pay taxes on that income. Because of the existence of economies of scale and scope in electricity generation, transmission and distribution, these nonmember activities can actually decrease the average cost of providing electricity to members, thereby increasing the apparent income from serving members and making it easier

Rates, Incomes and Poverty in Selected Cooperative Service Territories and U.S. Cities

State	City or Resort	Electric Cooperative	Residential Rate (cents/kWh)	Median Income	Poverty
CO	Vail	Holy Cross Energy	7.10	$ 50,000	4.3%
CO	Crested Butte	Gunnison County Electric	7.75	$ 32,300	11.8%
CO	Aspen	Holy Cross Energy	7.10	$ 52,744	5.2%
CO	Durango/Purgatory	La Plata Electric	8.09	$ 36,822	11.5%
CO	Steamboat Springs	Yampa Valley Electric	7.17	$ 42,799	6.8%
SC	Hilton Head Island	Palmetto	6.74	$ 38,867	13.0%
SC	Kiawah, Seabrook Islands	Berkeley	7.74	$ 35,150	16.8%
VA	Manassas, Potomac Mills	Northern Virginia Electric	8.84	$ 59,080	6.4%
	Average		7.57	$ 43,470	9.5%

State	City	Electric Provider	Residential Rate (cents/kWh)	Median Income	Poverty
CA	Los Angeles	LADWP (Municipal)	11.14	$ 35,616	16.4%
CA	San Francisco	Pacific Gas & Electric	10.72	$ 43,405	12.6%
CO	Denver	Public Service Company	7.51	$ 36,441	20.5%
DC	Washington	Potomac Electric Power	8.00	$ 34,980	19.3%
IL	Chicago	Commonwealth Edison	9.30	$ 40,181	14.0%
MA	Boston	Boston Edison	11.82	$ 36,260	20.7%
MI	Detroit	Detroit Edison	9.25	$ 35,357	18.0%
NY	New York	Consolidated Edison	15.87	$ 24,031	30.2%
PA	Philadelphia	PECO Energy	11.31	$ 28,897	21.7%
	Average		10.55	$ 35,019	19.3%

Source: County-level 2000 data on median household income, percent of population living below the poverty line from U.S. Bureau of the Census, at quickfacts.census.gov; average residential electricity rate by company service territory, from U.S. Department of Energy, Energy Information Administration, at www.eia.doe.gov/cneaf/electricity/esr/esrt14p4.html and onward, Table 14, "Class of Ownership, Number of Ultimate Consumers, Revenue, Sales, and Average Revenue per Kilowatt Hour for the Residential Sector by State and Utility, 1999." Note: The City of Aspen and City of Manassas are served by municipal utilities, while the outlying areas of the county are served by cooperatives.

to achieve the 85 percent member income threshold for tax exemption. Finally, tax exemption enables cooperatives to use the patronage capital of their members instead of going to equity markets to raise capital to fund their operations. Because they are not required to pay market-based returns to their members, and are actually prohibited from paying interest to members on patronage capital, they have had access to a potentially large pool of inexpensive capital. This degree of retention makes investment and expansion substantially less expensive for cooperatives than for IOUs and taxable corporations in other industries, because their cost of capital is substantially lower.

Loans and Loan Guarantees Through the RUS

The Rural Utilities Service (and its predecessor, the Rural Electrification Administration) has been making low-interest loans to rural electric cooperatives since its inception in 1936. These low-interest loans have enabled successful completion of rural electrification, the original mission of the RE Act.

The RUS makes loans to both types of rural electric cooperatives – distribution cooperatives, and G&T

cooperatives. Loan subsidies and guarantees decrease the cost of capital for electric cooperatives, particularly for generation projects. In many regions distribution cooperatives affiliate as joint owners of the power supply cooperative, and they are bound to purchase power from the power supply cooperative. Of the more than 900 cooperatives in the U.S., almost all G&T cooperatives and 700 of 850 distribution cooperatives borrow most of their capital from the RUS. While fewer borrowers are G&T cooperatives, their loans tend to be larger and have historically been more risky.

Furthermore, the RE Act stated that the REA could not charge a fee for loan guarantees, so the interpretation of the Act has meant that the REA bears all of the risk of the loan, including the borrower's default risk. The borrowers in this case have no incentive to manage their own risk, so the default risk is actually higher; this incentive is called moral hazard. Since the REA bears those risks, the cost of electric loan defaults falls upon taxpayers.

In 1996 the GAO estimated that borrowers in financial difficulty owed over $8 billion of the outstanding principal of $37.5 billion (21%) owed to the RUS. 12 electricity borrowers accounted for almost all of the $8 billion, and in total owed almost 25 percent of the entire RUS loan portfolio. None of the telecommunications borrowers were in financial distress. The RUS attributed much of the electricity delinquency to loans dating as far back as the late 1970s for nuclear generation and transmission construction projects.

Several of these financially strapped borrowers subsequently declared bankruptcy and could not repay their loans. Between 1994 and 1997 the RUS wrote off $1.7 billion in loans to five electricity borrowers. Four of those five were power supply, or G&T, borrowers. The GAO further estimated that the ongoing financial difficulties of many RUS borrowers could leave taxpayers at risk of $10 billion in losses through loan write-downs and write-offs to these troubled borrowers. The most dramatic and costly RUS borrower bankruptcy was Cajun Electric Power Cooperative, which declared bankruptcy in 1994. At the time of the bankruptcy, Cajun's loan balance with the RUS was $4.2 billion. After estimating the accrued interest from 1994 through October 2000, and subtracting payments to the RUS from Cajun and the bankruptcy court, the most recent estimated loan loss for the RUS on Cajun is $5.36 billion. RUS reports its loan loss on Cajun as $3.1 billion, in nominal terms. Not only does that estimate exclude accrued interest since 1994, it also does not report the figure in current dollars. Doing so would increase the loss estimate substantially.

Thus the REA/RUS loan programs are fraught with inefficiencies that impose great costs on taxpayers, most of whom are not cooperative members. Electric cooperatives do not have to adhere to the market discipline that borrowers in commercial credit markets do. Monitoring and bond rating by companies like Moody's and Standard & Poor's impose market discipline on the management and decisions of IOUs, because the effect of decreased credit ratings on them is costly. Cooperatives, with most of their debt owed to the RUS, face no such discipline on their management and decision-making.

Cooperative Preference Purchases of Federal Power

Electric cooperatives and public power companies are accorded preference in purchasing power generated by federal power marketing administrations (PMAs). Typically produced by relatively inexpensive hydro generation, federal power is usually sold to different customers at different rates depending on their preference status. This case particularly holds in the Pacific Northwest, where the Northwest Power Act of 1980 required the Bonneville Power Administration to charge lower rates to preference customers than to nonpreference customers.

Preference power distorts power markets, and does so to different degrees in different regions. Preference power creates distortions by artificially imposing power price differences where markets would otherwise result in common prices through arbitrage. The hierarchy of preference power also creates a fairness issue – favoring certain providers benefits some customers over others, even though we all pay to support federal power through tax payments.

Conclusion

The legislative and regulatory framework in which electricity cooperatives operate has not evolved to keep up with the many changes in the electricity industry and

the way that cooperatives do business now, and are likely to do business in the twenty-first century. Changing that framework to one that is more flexible and forward-looking would encourage efficiency in the electricity industry, and would eliminate income redistribution to higher-income individuals.

The current treatment of cooperatives is an inequitable subsidy of activities that differ substantially from the original intent of providing rural infrastructure. We recommend the following:

- Tax treatment – Congress should, at a minimum, revise the tax code so cooperatives do not pay taxes on the revenue they generate from selling to their members, but treat them like any other for-profit taxable corporation for the remainder of their revenue (both in having to pay taxes and in enabling them to benefit from tax credits and accelerated depreciation).
- Loans and loan guarantees – If continued, loans and loan guarantees should be determined by a combination of population density and average household income in the metropolitan statistical area, not by "once eligible, always eligible" as it is now.
    1. Move financially healthy borrowers to commercial credit.
    2. Implement loan limits, which will enable RUS to control their risk of loss.
    3. Do not offer 100 percent loan guarantees, which increase default risk and encourage moral hazard in borrowers.
    4. Do not loan to delinquent borrowers, which are risky and likely to default at high cost to taxpayers.
- Federal power – Congress should remove the preference power hierarchy from the sales of PMAs to cooperatives and municipal utilities. Sell to all qualified buyers on equal footing using an open auction framework.

Implementing these recommendations would contribute to a truly competitive electricity industry, with a non-discriminatory role for cooperatives. If policy does not account for the challenges of integrating cooperatives into the increasingly competitive electricity industry without distorting markets, at best some people will not enjoy the full benefits of competition, and at worst true competition will not emerge as long as cooperatives are excluded. ■

About the Author

Lynne Kiesling is Director of Economic Policy at Reason Public Policy Institute and Visiting Associate Professor of Economics at Northwestern University. She has a Ph.D. in Economics from Northwestern University.

In particular, Dr. Kiesling is increasingly called upon to offer commentary and analysis of the ongoing electricity crisis in the Western United States and gas price fluctuations in the Midwest and nationwide. In this role, Kiesling appears regularly on local, regional, and national programs and publications, and has authored numerous publications. Through Reason Public Policy Institute 's California Electricity Crisis Resource Center (www.RPPI.org/electricity), for which she manages content, Kiesling seeks to shape the debate and public opinion about workable, market-oriented energy policies.

Before joining Reason Public Policy Institute , Dr. Kiesling taught economics and public policy at the College of William and Mary in Virginia, during which time she published extensively in academic journals. She has also worked as an international economic consultant for PricewaterhouseCoopers LLP.

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