

Electricity Reform in Colorado: A Resource Guide For Citizens & Policymakers

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Executive Summary

- Deregulation of telecommunications, natural gas, and transportation saved American consumers billions of dollars, created new choices among sellers and spurred numerous new services in the bargain. Ending the artificial monopoly that electric utilities hold should deliver similar benefits to Colorado consumers.
- Low rates do not preclude Colorado's benefiting from deregulation. Colorado enjoys some of the lowest electricity prices in the U. S.A. Yet, well-considered deregulation can reduce rates even further and deliver new services to customers.
- Competition does not require the "mandatory forced open access" that has frozen the Colorado legislature. Instead, reformers should eliminate Colorado's laws that prohibit competing against incumbent utilities. Abolishing these artificially created monopolies will allow competition to develop more naturally in a number of ways.
- Instead of imposing forced open access over existing wires-and the regulatory superstructure necessary to manage it-market-based deregulation should protect the rights of utilities to control their power lines. But since the utilities will not be protected from competition, new power producers, real estate developers and others could offer delivery services to customers. The many competitive threats that ending monopoly franchises will unleash will often induce the incumbent utility to offer open access voluntarily in order to avoid attracting new competitors. Thus consumers get lower prices and competition, and even open access, without regulatory mandates.
- Electricity deregulation can even promote renewable energies such as solar, wind, geothermal and biomass power sources. Consumers interested in conservation may purchase power from any source they prefer under open competition; this choice is an option that today's captive customers lack.

Insiders say the relatively low electric rates available from Public Service Co. of Colorado, the state's municipals, and rural electric cooperatives have taken the steam out of deregulation issues for most lawmakers. Rates are at about a comfortable 6 cents/kWh and holding, so most lawmakers are asking what all the fuss is about.

"Colo. Restructuring Dies," *Electricity Daily*, March 13, 1998

I. Overview: The Current Dilemma

Consumers in Colorado pay prices for electricity that are among the lowest in the country. Therefore, indeed they are to be forgiven for wondering "what all the fuss is about" over electricity deregulation. Yet there is plenty to fuss about. Even though Colorado faces low electric costs now, it must take charge of its fate and ensure that the state experiences even further gains by assuming the role of a leader in energy deregulation. Colorado can be a state that does things, rather than a state that things are done to.

The \$212 billion electricity industry is the largest industrial monopoly left in the United States. Unlike when shopping for groceries, hardware or clothing, consumers dissatisfied with their electric service are stuck with the local power company.

Thanks to recent deregulation of telecommunications, natural gas and airlines and trucking-industries which had enjoyed governmental shielding from competition customers are recognizing that they owe no allegiance to artificial monopoly. Most states, including Colorado, have introduced legislation or regulation to bring retail competition to their markets.

To bring that competition about, federal and state reformers alike propose what is referred to as "forced open access," or "retail wheeling" as the model of reform. Under this approach, industrial, commercial and residential electricity customers would be allowed to select an alternative power company-much as they may choose among long distance telephone companies today. The local utility would be required, with compensation, to deliver the competitor's electricity to the homes and businesses of customers. Thus under forced open access, transmission and distribution of power remain regulated, monopoly functions of the local utility. Only pricing and entry for *generation* is deregulated under existing models.

Regrettably and paradoxically, the forced open access model requires enhanced regulation of the power grid, because someone will have to oversee all the unsolicited dumping of power into the grid. Plus, forced open access needlessly imposes "stranded" losses on existing utilities, who suddenly may be faced with a dearth of customers. Coupled with Colorado's low costs, recognition of such stumbling blocks have contributed to the cooling of passion for reform in Colorado.

A better approach for Colorado as well as the nation as a whole is a forward-looking, comprehensive, more practical industry liberation aimed at loosening the regulatory wires binding the entire industry, not merely the generation sector. This approach protects the long-term economic health of the electricity industry. Removing the artificial walls between sellers and buyers at all levels of the power marketplace is essential if customers and the industry are to fully benefit.

II. Who Are Colorado's Utilities?

Colorado is served by 59 utilities (see Figure 1), however the two investor-owned utilities (IOUs) provide 76% of the power sold in the state. These two private, shareholder-owned companies that serve Colorado are Public Service Company of Colorado and Utili Corp United, Inc. Municipal and rural cooperative utilities fulfill most of Colorado's remaining electricity needs, but these typically do not generate their own power, but instead purchase it wholesale from IOUs.

Figure 2 compares Colorado electricity market with the U.S. as a whole. Some highlights:

- Colorado's 1996 electricity sales were \$2.2 billion, roughly one percent of the U.S. total of \$212 billion.
- Colorado's average electricity price is 6.05¢ per kWh, about a penny less than the U.S. average electricity cost of 6.9¢ per kWh.
- The average monthly household power bill in Colorado is \$47. Commercial and industrial customers pay \$324 and \$15,011, respectively. The U.S. average bills for the three sectors were \$69, \$415 and \$6,864, respectively, in 1996. (Note that despite the higher monthly use of electricity and thus higher bill, Colorado's industrial *rate* is below the U.S. average.)

III. Why Are Colorado Customers Forced to Buy from a Monopoly?

Like all states, Colorado protects its utilities from competition by outlawing it. The historical justification has been that utilities are "natural monopolies," a term referring to declining costs of production that presumably allow one firm to serve the entire market demand more cheaply than two or more firms can. The problem with the theory is that if the monopoly were really natural, it wouldn't need government protection.² The market would naturally evolve toward a sole supplier. Historically that didn't happen—the move to a sole supplier status instead required government intervention.

A. Market Entry Is Restricted By Law

It is eye-opening to consider the extent to which Colorado's utilities—electric and otherwise—differ from competitive businesses. Colorado, like most states, requires special permission known as a "certificate of convenience and necessity" for new competition in the electricity business. As the *Colorado Revised Statutes* specify:

No public utility shall begin the construction of a new facility, plant, or system or of any extension of its facility, plant or system without first having obtained from the [public utilities] commission a certificate that the present or future public convenience and necessity require or will require such construction.

Monopoly is an artificial, not a necessary, state of affairs. According to economist Richard Geddes, municipalities at the dawn of the electricity industry often awarded overlapping franchises to multiple electricity providers, thereby creating vigorous competition. Starting in 1907, however, New York and Wisconsin passed laws transferring regulation to the state level, a model that quickly was adopted elsewhere. During the wave of state regulation between 1907 and 1914,²⁷ states embraced regulation of utilities. State commissions were given the power to fix rates, to control entry through "certificates of convenience and necessity," and to regulate additions to capacity. These changes effectively expropriated local authority to grant franchises.

The generally accepted fable of exploitative monopoly holds that, (1) customers were abused by monopoly utilities until state regulators came to the rescue, and (2) besides, a single firm is more

efficient because it can serve customers more cheaply over the relevant range of production. But the record finds competition thriving until cut short by the establishment of state monopolies. According to economist Burton N. Behling:

There is scarcely a city in the country that has not experienced competition in one or more of the utility industries. Six electric light companies were organized in 1887 in New York City. Forty-five electric light enterprises had the legal right to operate in Chicago in 1907. Prior to 1895, Duluth, Minnesota was served by five electric lighting companies, and Scranton, Pennsylvania had four in 1906.

Economist Harold Demsetz noted that "producing competitors, not to mention unsuccessful bidders, were so plentiful that one begins to doubt that scale economies characterized the utility industry at the time when regulation replaced market competition.

Any "market failure" in the nascent utility business was related, not to monopoly exploitation, but to the common ownership of rights of way and the failure to properly price access to the transmission and distribution paths, both of which may have led to overuse and the cluttering of streets. Market failure, arguably, was primarily an aesthetic problem having nothing to do with economists' traditional "falling-average-costs" notions of natural monopoly.

B. Electricity Prices are Regulated by the Public Utilities Commission

As entry into the business is regulated, so too is the price of electricity regulated by the state—rather than determined by supply and demand in the marketplace. As specified in the *Colorado Revised Statutes*:

All charges made, demanded, or received by any public utility for any rate, fare, product, or commodity furnished or to be furnished or any service rendered or to be rendered shall be just and reasonable. Every unjust or unreasonable charge .. is prohibited and declared unlawful.

What is the real effect of such laws that supposedly require "just" and "reasonable" prices? Unjust and unreasonable prices. The transition to state regulation furthered the interests of inefficient electricity producers, not consumer interests. Economist Greg Jarrell determined that customers paid *more* for electricity under the new regime of rate of return regulation than they had under competition.⁹ Paradoxically, the utilities regulated earliest, according to Jarrell, were the ones charging the *lowest* prices. If protecting public interest were the goal, regulators would have responded in the costliest states first. Instead, Jarrell found that prices in the earliest regulated states were 46 percent *lower* than prices in the late-regulated states (after correcting for variations in demand and costs). This finding supports the theory that regulation was a pro-producer rather than a pro-consumer undertaking.

Had the state regulatory takeover have been in the public interest, prices would have fallen and the quantity of power supplied would have increased after the transition to regulation. Instead, the early-regulated states experienced a 26 percent increase in rates relative to the late-regulated states.¹⁰ Electricity output was also reduced, while profitability and return on assets in the early-regulated states *increased* after regulation. Jarrell concluded: "These empirical results are difficult to square with the traditional explanation that state regulation was designed to minimize the undesirable social consequences of a naturally monopolistic electric utility industry."

Richard Geddes summed up the matter: "[S]tate regulation was instituted not to correct private market failure and to increase social welfare, but to provide firms with a way to insulate themselves from the discipline of competition.,¹² Utility regulation didn't fight monopoly at all, but fostered it by sacrificing the interests of smaller, competitive producers to larger, less-efficient ones.

IV. Lessons From the Past: Deregulation Savings in Other Industries

The essence of economic deregulation is to remove artificial impediments to competition, and there are precedents that help predict what might be expected from electricity deregulation. Research by Jerry Ellig of the Center for Market Processes and Robert Crandall of the Brookings Institution into the deregulation of gas, long distance telecommunications, airlines, trucking, and railroads found that "[I]n each case, customer choice lowered prices, expanded output, and led to quality levels that better reflected consumer desires."

As Figure 3 shows, "Within the first two years of deregulation for various industries, prices had fallen by 4-15 percent, and sometimes more for certain groups of customers. Within 10 years, prices were at least 25 percent lower, and sometimes close to 50 percent lower." Dollar savings across these industries now total more than \$40 billion per year.

Figure 3 Summary of Cost Trends Following Deregulation

While regulatory savings of such levels are a lot like a tax cut, the benefits are not as obvious and thus often go unheralded. Referring to the successes of deregulation, columnist Robert J. Samuelson noted, "If Congress created a program worth \$40 billion annually, you'd hear plenty about it. But deregulation's benefits get lost in controversy and complexity. Whenever an industry is pulled apart-and that's a consistent effect of deregulation-protest and pain are unavoidable. They get most of the attention." That protest and pain have been apparent in Colorado.

V. The State of Power Play: How Colorado's Reform Bills Compare

Broadly, stakeholders in Colorado's electricity debate line up behind alternative go fast and go slow approaches. Colorado's largest utility, Public Service Co., supports deregulation, while most public utilities in the state do not and have sought to halt any restructuring bill.

Senate Bill 178, introduced by Sen. Tom Blickensderfer and supported by Public Service, was killed in March 1998 by a 7-0 vote in the Senate Local Government Committee. The fear often expressed was that rates would rise for small customers. The House version (H.B. 1284, introduced by Rep. Paul Schauer) likewise did not emerge from committee. Many of those lawmakers opposed to S.B. 178 supported a bill (S.B. 152) to establish a 21-member advisory panel to study the impact of deregulation on consumers and report to the legislature by November 1, 1999.¹⁶ The panel held its first meeting in July 1998.¹⁷ Reform is temporarily on hold pending completion of this 18-month study of the impacts of deregulation.

VI. Benefits to Colorado Customers from Electricity Competition

Whatever the push and pull in Colorado, residential, commercial and industrial consumers in Colorado deserve access to the cheapest electricity that the voluntary marketplace can make available. They deserve not to be prevented by special interests from getting cheaper power if they can find it.

As Figure 4 shows, the U.S. average electricity price across residential, commercial, industrial and other user sectors was 6.9¢ per kilowatt-hour (kWh) in 1996. For the average residential buyer, the price was 8.4¢ per kWh. But what on earth does that really mean? For perspective, since the average household buys about 856 kWh of juice per month, 8.4¢ per kWh means the average household bill is \$72.

Average price aside, differences in what consumers pay between high and low cost regions are dramatic, as Figure 4 shows. Prices diverge even between even neighboring utilities in the same state. For example, UtiliCorp charges Colorado households 7.16¢ per kWh, while Public Service Co. charges 7.73¢ per kWh.

Figure 4: Average 1996 Revenue per Kilowatt-hour for U.S. Electric Utilities

Differences of a few tenths of a cent in kilowatt-hour prices can add up. As economist Robert J. Michaels told the *Wall Street Journal*, a 1¢ per kWh drop in the average 7¢ per kWh price of juice would mean roughly a \$28 billion annual savings to residential and industrial customers nationwide.

The Clinton Administration, for its part, predicts savings from restructuring of between 6% and 24%. Household savings from restructuring would amount to \$232 per year according to those estimates.

A. Savings from Industry Efficiencies

Consumers' current dilemma of overpriced electricity and limited service options results from rate of return regulation, a policy that allows firms to recover their capital costs even when competitive markets would not permit such recovery. For example, a utility can overspend on building a plant, yet its customers may be forced to pay the additional costs in their rates.

A comprehensive assessment of electricity restructuring savings was developed in 1996 by Clemson University economists Michael T. Maloney and Robert E. McCormick. They argued that the stock of electric generation and transmission capacity in the U.S. is "underused," in the sense that industry output approaches its physical capacity limits only when the nation's air conditioners are set on high in the peak summer months. Nonetheless, peak and non-peak rates are about the same. Competition would price juice more efficiently, depending upon whether it is in high or low demand. When electricity is in low demand and plenty of excess exists, consumers could time their power purchases for when it is cheapest, instead of facing a flat rate. In Maloney and McCormick's view "it is possible to produce at least 13 percent and possibly as much as 25 percent additional power yearly without adding one new generator or one new transmission wire." They predict that the average price

of electricity will fall by at least 0.9 cents per kWh, and estimate a long run net welfare gain to the economy as a whole at \$24.3 billion annually. Annual consumer gains are projected of between \$22.1 and \$107.6 billion.

Even in low-cost Colorado, consumers could benefit from the market changes brought about by customer choice; for example they could optimize their purchases (running the washer, etc.) by buying when rates are lowest, such as during the night. Competitive choice among providers would also allow consumers to avoid being penalized by bad management on the part of a local utility that could otherwise pass on excess costs.

Maloney and McCormick calculated Colorado's average 1994 residential electricity bill to be \$45, compared to the **U.S.** average of \$69. Monthly savings from deregulation in Colorado based on smoothing consumption between peak and off-peak rates would shave off an additional \$12 off the household bill according to their calculations (See Figure 5). That \$12 monthly reduction amounts to \$141 annually. ***Where the Colorado consumer spent \$540 during 1994 on electricity, competition would bring the bill down to just \$398, a 26 percent savings.*** Thus consumers even in low-cost states stand to gain from deregulation.

Figure 5: Household Savings in Monthly Electric Bill with Competition and Constant Consumption 1994

B. "Back of the Envelope" Savings

Total Savings for Colorado:

Simply comparing what Colorado customers pay today for electricity with what some lower-cost providers can offer is revealing and helps make the need for deregulation apparent.

While Colorado residents already pay considerably below the U.S. average for electricity, savings are nonetheless available. As Figure 6 shows, were competition to drive rates in Colorado down to the state's lowest IOU cost in each sector, the residential, commercial and industrial sectors would save \$39 million, \$52 million and \$29 million per year respectively at today's consumption levels. Total savings across all sectors would be \$121 million per year.

Looking beyond prices available to consumers within the state, were competition to drive prices to the *average-across all 50 states-of the* least expensive investor owned utilities within each sector, then residential and industrial customers would save \$50 million and \$18 million, respectively (See Figure 6). (Commercial customers already pay below this national average.)

Figure 6: Yearly Savings to Colorado Economy From Selecting Cheaper Providers

The aggregate savings in Figure 6 can be converted into savings per customer simply by dividing the dollars saved by the number of customers within each sector as shown in Figure 2). Pocketed savings, depicted in Figure 7, are as follows.

Pocketed Savings Per Colorado Customer:

Were competition to reduce investor-owned utility rates to Colorado's lowest investor-owned utility cost in each sector, individual residential, commercial and industrial customers would respectively pocket \$25, \$241, and \$12,276 in annual savings. The corresponding statewide saving, as noted above, would total \$121 million.

Were competition to lower prices to the average-across all 50 states-of the least expensive IOUs within each sector, then individual residential and industrial customers would save \$32 and \$7,303 respectively. Commercial users in Colorado already pay well below this average.

Figure 7

Figure 7 also provides a glance at what consumers would individually save if prices fell along a range between five and 40 percent. A 10% savings from competition would constitute less than a 1¢ per kWh drop in Colorado's average price of 6.05¢ per kWh. But such a drop would save residential, commercial, and industrial customers \$57, \$389 and \$18,013 on annual power bills, respectively. Statewide, a 10% price drop would mean that \$224 million would be saved annually.

Even tiny savings make a difference. A price cut of only 5% would shave \$28 off the annual residential power bill. On the other hand, a 40% saving would cut \$226.

VII. A Free Market Reform Model for Colorado

To achieve these savings for consumers, reformers must strive to address the concerns of all reluctant parties during the transition to a free market. The best way to do that in Colorado is to recognize that *the forced open access model now stalled in the legislature is stalled precisely because it is not a real free market reform proposal.*

While well-intended, the mandatory forced open access model represents restructuring, not deregulation. Forced open access will require adopting a regulatory superstructure to oversee transmission and distribution; that will produce unwanted long-term consequences stemming from the abrogation of property rights and resultant treats to reliability and innovation. Instead, competition can be achieved more quickly and more efficiently *by ending the utility territorial franchises* that, as described earlier, now outlaw competition. That step would allow rivals to figure out for themselves how to gain access to Colorado customers.

The dominant forced open access model, on the other hand, does not end distribution monopoly franchises at all. It would instead leave intact the local utilities' monopoly right to distribute power, and also further entrench a bureaucracy to oversee grid operations. But permanent regulation of these networks is unnecessary. *The goal of reform should be to eliminate the need for the Colorado Public Utility Commission's regulation of any aspect of the utility system-not* to lock in the Commission's long-term oversight. Concerns about the real or imagined threat of monopoly go straight to the heart of the questions of whether electricity can become a truly free market industry, or whether transmission and distribution operations must forever managed by government.

For reform to work, the regulated segment must be made smaller. *A free market in electricity simply means that anyone should have the right to sell to anyone else, regardless of where that*

customer lives, provided that someone is willing to transport that power. And willing they will be, in several ways.

A. Alternative Transmission

Along with competition-minded electric utilities already eager to serve others, gas, railroad, cable and telecommunications firms already own rights of way to customers. If not barred by today's franchises, any of these companies could offer competitive power delivery to customers alone or in conjunction with independent power producers. Such cross-industry consortia should become quite prominent in providing electricity and other services. Whenever a new mall, commercial strip or neighborhood is built, someone other than the incumbent utility should have the opportunity to serve those customers. To expand service further, access to highway and other government owned rights of way could possibly be auctioned off to provide long-range transmission.

Especially on the grid's fringes, we should see construction and ownership of wires by non-utilities. Colorado real estate developers themselves could get into the game by teaming up with power producers.

Grid competition does not mean that parallel lines will, or need to, pop up everywhere in Colorado. On the contrary: The odds are that without franchise protection, massive investments in new transmission capacity by upstarts need not occur because existing utilities will lower their prices or offer voluntary open access precisely to ward off new entry. The threat of competition alone, even without new entry, would thereby tame much of utilities' power. For instance, in order to expand in the new competitive marketplace, today's utilities will need access to *other* utilities' transmission lines; thus they have an incentive to keep their own access costs low and reasonable to avoid retaliation.

Like any other ordinary businesses, ***utilities should be allowed to charge what the market will bear for grid access in order to maintain and replace their grid.*** This is essential for healthy development and investment in the grid. And as long as competitors can enter utility markets, competitive pricing will prevail and consumers will benefit: After all, the utility no longer has a monopoly. Even under limited competition, the feared transmission "natural monopoly" will prove contestable: utilities will act as if they have competitors even where none exist.

Prohibitions against utilities' diversifying into other profitable utility or nonutility businesses will and must disappear under competition. That step will create further synergies and further aid the development of new consumer services. As an example, utilities should be allowed to expand their range of services, such as by entering the telecommunications industry, or by leasing their own substantial fiber optic capacity to telecommunications providers. Many utilities are developing "smart home units" that will enable them to provide and manage phone and cable TV service, and also manage timing of operation for home appliances.²⁴ Innovations to serve customers better will flourish in a competitive environment.

B. On-Site Power Generation

The natural gas grids lacing America already constitute a "parallel grid," in a sense, that is potentially competitive with the electrical grid. The impending rise of small-scale, low voltage "distributed" generation turbines threatens to make the grid itself obsolete, especially if the distribution utilities' lock on consumers is broken.

The most talked-about expression of this new paradigm is the so-called microturbine. These highly efficient, lightweight, desk-size devices range from a few to a few hundred kilowatts, or more if bundled. A 24-kilowatt turbine has been designed, for example, enough to power large homes or convenience stores. In some models, high pressure air bearings dispense with lubricated system's pumps and filters altogether. The devices also lend themselves to recapturing the waste heat produced as a by-product of electricity generation; this recycling of otherwise wasted energy is an important innovation. Along with the fact that their power can be distributed on short lines or consumed on-site, small-scale power generation is capable of profoundly changing the economics of power infrastructure development. While their costs are relatively high now, several companies are mass-producing the devices and promising to bring prices down.

Trigen Energy Chairman Thomas Casten, a noted "evangelist" for the technology, goes so far as to state "Central station generation ... is finished as an economically viable technology. In its place, widespread installation of smaller, more-efficient generation, close to heat loads, will come to predominate and will collapse the value of much of today's generation-and transmission-assets."

C. User Ownership of Power Networks

Working in concert with the "competing grids" model of new wires, and the "nogrid-at-all" paradigm of microturbines and distributed generation, phasing out exclusive franchises will put into play customers' own incentives to exercise control over critical network assets. Large power users, such as a manufacturing plant or a consortia of businesses in a high-tech office park, have incentives to purchase portions of the grid themselves, thereby entirely eliminating any risk of price gouging. Such user ownership will likely become an important feature of the grid structure under a free market.

D. "Rifle Shots" If Needed

The foregoing examples illustrate that there is never an excuse for a *universal*, politically managed forced open access regime. At most-as a temporary measure where bottlenecks cannot be overcome in a reasonable amount of time and if there is a legitimate threat of customer abuse stemming from the historical monopoly status of the utility in question-"rifle shot" requirements for forced open access might be considered. This can be temporarily justified on the grounds that the rights of way across which utility lines run (not necessarily the lines themselves) possess a public character. But the access requirement must sunset; and private control of the bottleneck in question is urgent in order to provide the proper incentives expand capacity.

E. The Result: Rapid and Successful Deregulation

Colorado's primary forced open access bill, S.B. 178, would have delayed competition until the next century: January 1, 2002. But if the legislature simply abolished monopoly franchises, competition could begin to work its way through the industry right away, avoiding the needless loss of precious years and dollars. By protecting utilities' property rights to their transmission wires, a bill to end monopoly franchises would allow the electric grid to develop naturally in response to competitive pressures. The integrity of the electric grid and incentives to invest would be preserved.

The opposite would occur under forced access. By taking away the utilities' rights to control their own transmission equipment, forced access would distort development and evolution of the power grid. When government interferes with the free market by taking away property rights, the market does not work efficiently, and more government intervention is then "needed" to "cure" the "market failure" (which was caused by the government in the first place). Since forced access is simply an uncompensated taking of the utilities' property rights, market failures and further government intervention would be nearly inevitable.

Moreover, electric utilities are likely to challenge forced open access in court (as phone utilities already have), delaying competition still further beyond the legislative deadlines. Simply ending monopoly franchises will sidestep these delays.

VIII. Answering the Critics

Deregulation's critics raise many legitimate concerns that reformers simply must address. Clearly not everyone believes consumer savings will emerge. Some commentators believe only large customers (such as manufacturing plants) will benefit, while others worry about environmental harm, and others fear declines in electricity service quality and reliability.

A. Since "Big Dogs Eat First" Under Competition, Won't Households Pay More?

A prominent and understandable worry with respect to the transition to competition is that the "big dogs eat first." This refers to the fear that large industrial and commercial power users will gain access to competitive power first and opt out of the regulated network. Their departure would leave captive residential customers and small businesses behind, stuck within the regulated system and vulnerable to rate hikes when utilities attempt to recoup revenues lost from their departed large customers.

A recent Consumer Federation of America and Consumers Union joint study cited four reasons to fear higher consumer costs: price discrimination against small users; monopolistic behavior by power companies; new operating costs such as a potential loss of the bulk load coordination that now occurs; and the imposition of "stranded costs" on consumers.

The critics are right that unjustified stranded cost recovery would dilute the gains from competition. The simple answer to this concern is that under a genuine deregulation system, consumers would not be saddled with stranded costs. Deregulation means that utilities lose their monopoly, and gain the right to charge whatever price they want. Only under a system of continued regulation can utilities make sure that they can pass the cost of previous capital investments (so-called "stranded costs") on to the consumer. With true deregulation, the consumer simply buys the cheapest electricity, and is not charged for prior investment decisions of the different vendors.

The critics' other fears are less persuasive. In fact, Colorado's "big dogs" are already eating. Large users already can and do negotiate special rates, wielding market leverage the typical small customer lacks. If utilities do not offer concessions, utilities face the prospect of their largest customers either moving to cheaper regions of the country, relocating out of the country altogether or either deciding to generate power and heat on-site and remove themselves entirely from the grid. (The self-generation of power and heat for on-site use is known as cogeneration.)

The reality is that without competition, *only* large power users possessing market clout can bargain for lower electricity rates. But the utility, as a regulated monopoly, is guaranteed a "fair" rate of return on its investment: the risk is that residential ratepayers will have to take up the slack if large customers desert. Some argue that small business and residential customers in other states have had to pay for recent gains of industrial customers.

Thus, consumer advocates should recognize that household ratepayers arguably have more to fear from deal cutting under existing regulation, since existing regulation provides the consumers with no exit. True deregulation offers the only chance to get the small customer in the game as well. By cherry-picking their own biggest customers, dampening the big customers' incentive to lobby for deregulation, electric utilities can succeed in delaying full competition for everybody else. Colorado is not immune: under regulation, recent cents-per-kWh prices for residential customers have risen in current dollars, while rates for the commercial and industrial sectors have fallen. Price differences of a few hundredths of a cent may not seem like much, but when multiplied by billions of kilowatt-hours, they add up.

As shown in Figure 8, the electricity consumed in 1996 by residential consumers cost them \$15 million more than same amount would have in 1994-but the industrial sector paid \$23 million *less* for what its 1996 needs would have cost in 1994. The commercial sector paid \$10 million less.

Figure 8: How Prices Changed Across Sectors in Colorado, 1994-96

Averaged across Colorado's 2,400 industrial users, the 1996 industrial savings of \$23 million breaks out to a yearly saving of \$9,532 apiece, or \$794 per month. Such discounts are not distributed equally, of course: the lion's share would likely go to the largest power users, those who would cause the most pain if they left the system.

While the large savings industrial customers received are spread over a relatively small number of entities, the additional \$15 million paid by Colorado's 1,885,901 residential customers amounts to only \$8.18 apiece for the year. Since that increase is so unnoticeable, residential consumers do not bother to fight the costs being shifted to them. Full deregulation, with the ability to aggregate, would offer the best chance for residential and commercial customers to secure savings worth fighting for. If deregulation doesn't happen soon, the big dogs will continue to get better deals while households feel more of a squeeze. Colorado can embrace deregulation to ensure that doesn't happen.

Competition would finally allow power marketers to aggregate small customers into units with market power, helping them benefit from lower prices, too. Even isolated rural customers could purchase power from voluntary pools or clearinghouses reflecting up-to-the-minute price changes. Power companies anticipating the new age are already conducting aggressive advertising strategies to prepare for the coming competitive markets, in hopes of distinguishing their electrons from others'.

B. Since Colorado Is Already a Low Cost State, Won't Deregulation Raise Overall Prices?

Another fear is that, since Colorado's overall rates are already low, competition will motivate the state's relatively cheap utilities to sell their power out of state-where they can collect better prices and

higher profits. Their leaping into outside markets, in turn, would leave Colorado customers with higher cost producers. Surely there is some merit to this argument: any seller will sell where the highest profit can be obtained. But under the proper deregulatory model, that of ending franchises, a transitional period of deal making must take place, forestalling any hemorrhaging outflow. Only the "instant access" of forced open access can cause producers to leave in a wave.

Furthermore, fear of the abandonment of Colorado by its own utilities is based on an inappropriately static view of the market. In other words, Colorado's prices are *not* low and its services are *not* adequate today if one thinks in terms of what competition could bring. Completely new providers would emerge to provide power—for example, new gas turbines can produce power at 3 cents per kWh.

Additionally, competition allows the offering of new and better services combined with electricity, such as telephone, cable and Internet. Colorado Rep. Paul Schauer, for example, is one who thinks Colorado's low rates will go lower: "If you open up the market, I think you'll find independent power providers who will offer power at a lower rate. As you begin to see the ability to move large amounts of electricity, there will be other players that can provide alternatives."

A spokesman for the Power Marketing Association told *Plant Sites & Parks* that "competition is already bringing prices down in the wholesale market. States claiming prices will rise are generally states that have low retail rates. However, ***even the lowest retail rates are substantially higher than rates available in the wholesale market. Prices will come down for everyone.***"

C. What About the Rural Customers?

Rural co-ops and municipal utilities sell 38% of the electricity in Colorado, a significant amount.³² The job of reformers in Colorado (and elsewhere) is to convince these customers that reform works in their best interest, relative to the status quo.

Too Remote for Competition?

Related to the "big dogs" concern is that of what happens to customers of rural cooperative and municipal utilities under competition. These folks are often seen as too few and too remote to attract the attention of competitors, or perhaps even to retain the service they currently get. One may do a lot of things in the name of defending isolated customers. But something one may not legitimately do in the name of helping rural customers is defend a regulated monopoly system that keeps prices artificially high and restricts choice. Deregulation will make power more affordable; and the less electricity costs, the easier it is for all customers, including rural customers, to afford it. Moreover, the wires are already in place in rural areas: to the extent competition induces producers to lease their transmission lines to new providers, new suppliers can transmit power over the lines as well as incumbents can.

The inability of certain individuals to afford electricity is properly a public welfare question wholly separate from the desirability of deregulation itself. For example, we do not impose price controls on food so that poor people can afford to eat; we let the free market set food prices, and we provide food vouchers (food stamps) to people who cannot pay the market price. If some rural electrical customers are to be subsidized, they should be subsidized openly, or protected in a transition period that is above-board.

Rural Utilities Can Better Serve Customers By Embracing Competition

Competition is coming, and public utilities serving rural areas, if they are to survive in some form, must get out in front and embrace it. Even though the Federal Energy Regulatory Commission does not require wholesale forced open access for co-ops, the co-ops are going to get dragged in one way or another during the establishment of retail competition. Now is the time for the co-ops to jump in and alter the debate. Under Rep. Dan Schaefer's federal restructuring bill, for example, public utilities would have had to come up with their own plan for forced open access within six months-or else defer to either the PUC or the FERC itself. Similar crackdown provisions will attend any federal restructuring bill.

To avoid that undesirable state of affairs, public utilities can embrace and benefit from an end to franchises. Rural co-ops and municipal utilities can take steps to protect themselves and become competitive entities. First of all, under a free market approach rural co-ops, for instance, would not be required to provide (involuntary) open access: there would simply exist a right for other utilities to compete with the co-ops if the competitors figure out a way. Other competitors can enter the market and serve the rural customers through alternative distribution arrangements-just as other competitors could enter the markets where investor owned utilities currently have a monopoly. (Incidentally, low population density in rural areas would make it easier, not harder, for new competitors to extend new transmission into rural areas.)

Strategic Partnerships Will Also Benefit Rural Customers

Another way that rural co-ops can prosper in a competitive era is to form partnerships with telecommunications firms, for example. Or co-ops may choose to allow voluntary open access to their wires to a newcomer who promises to help with upgrade, maintenance and reinforcement.

Currently, municipal and cooperative utilities possess legal advantages not available to IOUs. Co-ops are immune from antitrust laws, can exercise the power of eminent domain, and enjoy tax-free status and access to tax-free loans. Opponents of public utilities tend to emphasize these advantages with the implication that in the competitive environment the co-ops should face the same legal treatment as the IOUs: subsidized entities and those with expropriation power simply should not compete with the private sector. These concerns imply that a way for Colorado's Restructuring Committee to approach reform is to "make a deal" with rural co-ops and municipal power companies. Many of these entities want to enter other services such as telecommunications and propane and appliance services. The co-ops and municipal power companies should be allowed to enter new fields-provided they give up their monopoly and government-granted advantages that make it unfair for them to compete against private business.

The idea is for the subsidized component of public power to wither away by attrition in a competitive market. Public power companies must be allowed to enter new markets only by actually becoming a *market* participant (privatizing), not by feigning market status with acting skills. As the electric market grows, subsidized public power will inevitably become a smaller and smaller subset of the multi-networked universe. The subsidies that remain will be given to electricity consumers with genuine need, not to utility monopolies.

Thus it is essential for public utilities to embrace new business partnerships, to cut deals and make long-term contracts with largest customers to lock them in. It is up to the public utilities to look for ways to cut rates and forestall customer flight. Delving into new businesses is crucial for companies that serve rural areas: We don't need just to keep rural areas electrified; rural areas also

need telecom, energy, Internet services, and short line railroads. Public utilities must work to form partnerships with these businesses.

Public utilities have other options: for instance they could sell off their generating assets and privatize their operations, and become the "system operator" of their wires responsible for coordinating competitive power flows. There are many more options available to rural utilities and their customers under competition than what they have today under regulation, and all would extend opportunities and services for consumers.

Monopoly, Not Deregulation, Is the Rural Customers' Real Enemy

A big concern for rural customers has been that their rates will rise, that they will face higher prices. The real danger, however, is that rural customers may be cut off from new opportunities by their supposed "protectors"-the monopoly public utilities. Moreover, it appears that there do exist willing providers under free competition. For example, the 4-County Electric Power Association (a Columbus, Mississippi co-op) decided it did not want to purchase its power from the Tennessee Valley Authority-and was courted by 30 providers. Concerned co-ops could also band together to form powerful buying groups in a competitive market if they desired.

Additionally, distributed generation -- the installation of smaller generators on the fringes of the grid instead of new central station generation and high-voltage wires -- can help serve remote customers. In fact, new entrants might be willing to help foot the bill for distributed generation on the outskirts if allowed access to other parts of a public utility's system. Competition is necessary to root out the many opportunities that will inevitably emerge. For those still concerned that rates will rise, transitory rate caps, like those proposed by some Republican congressmen in the debate over privatizing the federal Power Marketing Administrations, are another option during the transition to full competition.

D. Will Consumers Be Saddled With Utilities' Stranded Costs?

Nationally, utilities are demanding between \$100 and \$300 billion in "stranded cost" recovery as the price of forced open access.³⁴ Stranded costs primarily represent the value of generating assets (such as older inefficient plants and costly-to-run nuclear plant) that competition would render uneconomic as customers bypass the utilities for cheaper alternatives. Utilities claim entitlement to recovery of these capital costs because the capital construction projects were approved and carried out under the prior regulatory monopoly regime. Another important category of stranded costs are federally imposed contracts requiring utilities to purchase power from other suppliers (often "alternative energy" suppliers) at above-market rates.

The principle Colorado policymakers should obey here is simple: utilities deserve to be fairly compensated for the electricity they sell, not for the loss of their monopoly. Government-created monopolies are illegitimate and immoral. No company and no stockholders in a company has a right to *additional* income extracted from tax payers or utility consumers just because the government decides to stop wrongfully preventing anyone from competing with the company.

Poor management should not be indemnified. However, there are a few instances in which regulators *required* a utility's bad choice. These instances should be a matter of public administrative record (i.e.: Regulator: "Build the nuclear plant." Utility: "We don't want to." Regulator: "Do it

anyway."). When a utility can prove that regulators forced a company, against its will, to build a high-cost/low-value project, compensation should be in order.

Many state deregulatory initiatives, such as California's multi-billion dollar bailout of stranded costs, go overboard in yielding to utility demands. But the result is not surprising: The forced open access model virtually guarantees that utilities recover significant stranded costs in wires charges, even where recovery is not justified; the California forced open access model forces customers to remain captive to utility distribution lines, and thus utilities still call all the shots. The captivity invites protracted debate over the level of such recovery.

But if access to transmission lines is not mandated in the first place, utilities no longer stand between customers and cheaper power; and as a political matter, utilities are less able to force stranded cost extractions from consumers. Hence, ending utility monopolies is superior to a forced open access regime because it protects the property rights of both consumers and producers. Producers are protected from the taking of their transmission lines (making the producers give other producers involuntary access to the transmission lines is a form of taking); and consumers are protected from being forced to pay excessive fees for utilities' stranded cost recovery.

Avoiding stranded cost recovery today also avoids setting a precedent for future bailouts when the forced open access regulation model of the electric grid ultimately fails.

It is instructive to consider what could be done with the \$200 billion that otherwise would have been spent on a stranded cost bailout. Remaining in the economy in the hands of consumers and producers, that \$200 billion would comprise enough wealth to purchase over 200,000 miles of 230 kilovolt transmission line. (Such lines cost approximately \$840,000 per circuit mile.³⁵) That's enough to circle the equator eight times. Consumers will not waste the \$200 billion by buying power lines around the equator; they will spend the money for improved electrical power delivery when appropriate, and will spend the rest of the money in other sectors of the economy.

E. Won't Deregulation Harm the Environment?

Customer choice means more than dollar savings, and even more than the opportunity for fancy new services. Deregulation, for the first time, offers conservationists the opportunity to purchase power from any preferred, environmentally friendly source. Unlike today, under open competition consumers could directly choose solar, wind, biomass, geothermal or other renewable power sources.

Markets Can Make Green Energy More Competitive

In anticipation of deregulation, renewable energy sources are already being marketed as "green" energy, and many consumers in Colorado "not deterred by high price" have signed up to purchase wind-powered electricity.³⁶ About 6,200 residential and 40 commercial customers of Public Service Co. signed up for power from a new wind unit.

Opportunities for green energy companies would expand under competition. Green energy is not yet economically competitive with conventional energy but it does not have to be. Under deregulation, consumers who prefer green energy could choose it even if it is not the cheapest source. Similarly, many stock investors today choose "socially responsible" mutual funds (i.e., the fund does

not own tobacco, alcohol, or other controversial stocks), even though the socially responsible funds almost always earn a lower rate of return than conventional funds. Investors are willing to sacrifice a little income in order to enjoy the satisfaction of investing according to their moral principles. Likewise, electricity consumers who are willing to pay a little extra can gain personal satisfaction from buying green energy.

Further, competition among green generators (who are now prohibited by exclusive monopoly franchises from serving the public) offers the best chance for the green sources to become increasingly competitive, and thus attract more and more consumers.

Noting public environmental sentiments, companies like Green Mountain Energy Resources and Enron have stepped forth to offer "green energy" packages to consumers, who appear to be responding. Such businesses and their customers enjoy being seen as caring for the planet. Beyond Colorado, about 145 residential customers (3% of the city's population) and 20 business customers of Transverse City, Michigan's municipal utility signed up to switch from coal to wind power. Seventy-five more customers (1.5% of the population) are on a waiting list. In a free electricity market, no one would have to go on a waiting list to purchase green energy. The 4-5% of customers who want green energy could purchase it as easily as they purchase stock in "environmentally responsible" corporations.

Environmental stewardship is a luxury good, in a very real sense. This does not mean that environmental stewardship is unimportant, in these sense that "luxuries" like diamonds may be considered unimportant. Instead, the simple fact is that the higher a society's level of prosperity, the better the society can afford to take care of the environment. The filthiest, most squalid environments around the world are often those in which people are poorest. The cleanest environments are found in nation where citizens are prosperous. Like all luxury goods, consumers buy more environmental stewardship as a percentage of income as incomes rise.

Price reductions on traditional power created by competition indirectly make renewable energy more affordable, and increase the willingness to purchase "green" power. As choice in electricity lessens the role of the regulator in energy source selection, consumers can take charge. Full deregulation would allow even greater options than exist today, and consumers will be better able to afford them thanks to wealth-enhancing effects of deregulation.

Surveys on willingness to use "green" energy find 40 to 60 percent claiming to be willing to buy green; however, "Few green-power programs have enrolled more than 5 percent of ratepayers. Yet these numbers are comparable to those proposed in unnecessary mandates, such as the Clinton proposal that 5.5% of all electricity sales come from electricity generated from renewable sources.⁴¹ (Although hydroelectric power is comes from a renewable source, hydroelectric power would not count for the Clinton quota.) The rate of voluntary adoption seems to roughly correspond to the 2% (to 4% by 2010) federal mandate in Rep. Dan Schaefer's Electricity Consumers' Power to Choose bill. In other words, if consumers are given free choice, they will buy green power in at least the same quantities which would be mandated under various federal plans; there is no need for a mandate.

The Environmental Benefits of Competition

A market allowing free choice would surely give green energy a better chance than an artificial mandate that prolongs the impulse to subsidize. Why? Because forced open access protects

today's central station generation, and disadvantages stand-alone renewable power. As a result, breakthrough green energy development is virtually out of the question. Forced open access forces green energy projects to take a back seat and develop in non-optimal ways thanks to a distorted market structure.

Considerable environmental benefits will also stem from the fact that competition would allow customers to monitor their electricity usage and prices in real time throughout the day. They can shift to off-peak times (e.g., run the dryer at night) in order to save money and conserve when energy is scarce. That smoothing of power production will have the further effect of lessening the need to build additional capacity to serve peak hours. The resulting lessening of pressures to build more generation capacity could confer additional environmental benefits.

F. Won't Deregulation Jeopardize Power Grid Reliability?

Many argue that competition might lead to service interruptions, as the grid - which was not designed for open access - experiences stress, overuse and misuse. Regulators intend to protect reliability under wholesale (and ultimately retail) forced open access by anointing "independent system operators" (ISOs) who will oversee and manage the multitude of power flows injected into the grid. Colorado utilities, under this model, would likely be required by federal regulators to join ISOs whether they wanted to or not.

The existing regulated system is not without its own reliability problems, however, particularly in regard to planning and investment in future infrastructure. Coloradans in Public Service's territory experienced rolling blackouts in July 1998 as a result of the utility's inability to meet demand, and perhaps failure to properly take into account the greater electricity needs of new homes and office parks. The 1998 incident will surely play a significant role in the conclusions of the Restructuring Commission's report in 1999.

Reformers in Colorado must understand that genuine deregulation and free competition will improve reliability-but restructuring (forced open access) will not. Deregulation means ending the monopoly franchise and allowing present and future transmission and distribution owners to retain control of their property. Wire owners facing competition clearly have incentives to protect reliability, while newcomers challenging an incumbent would be required to convince potential customers that they are even more trustworthy than the incumbent. (Similarly, long-distance competitors to AT&T had to convince customers that the new service would be as reliable as the old.)

Reliability is most seriously threatened by the very concept of "independent system operators," (governmentally-chosen supervisors of the electric grid) who act not on the profit motive but on political, wholly redistributionist ones, and whose decisions affect *everyone*. While strong property rights are essential for the grid's healthy evolution, forcibly established ISOs annihilate property rights over the grid. No one will invest in enhanced grid technology or new wires if prices charged are to be tightly regulated and cost recovery is subject to political uncertainty.

Accommodating the flows of electricity on the grid, correcting for adverse impacts of loop flows, and upgrading the grid will require arduous planning, scheduling, and switching efforts. If consumers are to be best protected, owners require the right to profit handsomely from these services. Free-market profits will attract new entry from power producers and maintain investment for decades

to come. Replacing property rights and free competition dynamics with regulation replaces vibrancy and reliability with inefficiency, distortion, and perhaps underdevelopment of key nexus points on the grid.

The job of free markets is to gauge and react to pricing signals, and those signals themselves must be free to fluctuate to reflect conditions in the real world. Fixed, regulated prices for grid access will be either too low (leading to skimping) or too high (leading to gold-plating). The governmentally-set prices may be accurate occasionally but that can only be accidental. Price regulation on transmission and distribution will not work any better than it did in generation-which is why deregulation is an issue, after all.

G. Won't Deregulation Harm States' Ability To Collect Taxes?

Since utilities are often major tax collectors for the states, some argue that deregulation will adversely affect state coffers. The problem arises because states have imposed special large utility taxes on the utilities. Since the utilities have a monopoly, they can pass the tax along to their customers. While individuals have some ability to avoid certain kinds of taxes (for example, they can go shopping a mall located in a county which has a lower sales tax rate than their home county), little can be done to avoid the utility taxes. Thanks to the monopoly, there is no place else to buy electricity. Moreover, the tax on utilities (unlike a retail sales tax) is hidden from consumers; the consumer just gets an electric bill, and is not told how much of the electric bill is for utility taxes rather than for electricity. As a result, the heavy taxes on utilities have become an important revenue source in many states.

The real problem here is obvious. The sale of electricity is supposed to be a *business*. Utilities should not have been conscripted into serving as tax collectors to begin with. Since they were, there is no easy answer. William Kimble of KPMG Peat Marwick has reported that, under restructuring, states imposing taxes on utility gross receipts may lose some income as prices fall.⁴⁴ Where power marketers-who are exempt from utility taxes since they own no generation facilities-take business away from utilities, states lose even more.⁴⁵ (Of course the power marketers pay normal corporate income taxes, but not the extra utility taxes.)

Thus, some states are looking at consumption taxes on electricity users to make up losses. Like a sales tax, that has the advantage of keeping the level of taxes obvious to the citizen. The problem of collecting taxes under deregulation, strictly speaking, does not exist. The problem is actually the politician's problem of fessing up, so to speak. Reformers should strive to keep electricity providers out of the tax collecting business, or at the very least insist upon above-board taxes.

IX. How Colorado Can Lead In Electricity Deregulation

The previous section addressed reasonable concerns voiced by the critics of restructuring, and proposed ways of addressing those concerns in restructuring legislation. Now we turn to precisely how Colorado might legislatively end the electricity monopoly, keeping in mind that any proposal that follows can address critics' concerns as specified above.

Thirteen states have already enacted electric industry restructuring legislation, five have issued regulatory orders, and all the rest save two are considering the issue. But even bellwether

states such as California and Pennsylvania that opened their electricity markets to everyone with a kite and a key have not truly deregulated. Instead, they have adopted the forced open access model. The distortion of tightly regulating transmission and distribution will continue to be felt. The sad part is, erecting this regulatory superstructure and allowing excessive stranded cost recovery is achieving relatively scanty competitive options for residential consumers. Only a handful of consumers have signed up with competitors in California.

Though the steam for deregulation may have temporarily dissipated in Colorado while consumers await its tedious "study" of the issue, this calm state of affairs will not last.

Retaining regulation of the industry's transmission and distribution does not qualify as free market deregulation. Colorado's policymakers can be the first on the national scene to explicitly recognize that fact. Deregulation requires removal of monopoly power over delivery services, and no state has done that yet. Colorado's legislators should give the market the opportunity it needs; Colorado should avoid the price controls and regulation that forced open access and mandatory pooling will require. One should certainly expect *voluntary* pooling and load aggregation to emerge once exclusive monopoly franchises are ended, and many advantages will flow from these innovations.

The earlier section, "Why Are Colorado Customers Served by a Monopoly?" covered the *Colorado Revised Statutes'* prohibition of construction of new facilities without a certificate of convenience and necessity. These artificial barriers must be abolished. Since the "Colorado PUC cannot order statewide electric industry restructuring without a change in state law," that leaves legislative solutions.

Reformers should adopt an alternative approach from the forced open access model seen in the bills of the past two legislative sessions. For example, the legislature could amend the *Revised Statutes* to provide that any willing provider shall have the right to provide electricity generation and delivery services, to any willing consumer. Removing prohibitions against offering electric service would allow competition not just in generation, but in transmission and distribution along existing private rights of way. Avoiding forced open access over existing wires should also promote innovations such as microturbine development.

In essence, Colorado should consider legislation to remove the requirement for certificates of necessity altogether. One option for amending Section 40-5:

No certificate of convenience and necessity shall be required for negotiating rights of way or electricity services between contracting parties.

Alternatively, but to similar effect, the Colorado legislature could simply limit the PUC's authority or right to interfere in private power contracts:

The PUC shall not interfere in voluntary private power generation, transmission and distribution agreements between any in-state or out-of-state seller and any willing buyer.

Article XXV of the Colorado Constitution grants the Public Utilities Commission "all power to regulate the facilities, service and rates and charges" of any "public utility." Given that regulatory power is constitutionally rather than statutorily granted, a legal determination needs to be made on the extent of Constitutional changes necessary for fully effective deregulation—a worthy task for

Colorado's restructuring working group before it reports in November 1999. But the very language in Article XXV implies another option for reformers: to adopt legislation explicitly specifying that the offering of competitive electricity services *does not* make one a "public utility" under the law, and thus not subject one to the need to acquire a "certificate" in the first place. If a company does not enjoy a public monopoly, then it should no longer be considered a public utility. The supervision of the Public Utilities Commission may be necessary for a company which is legally protected from competition; but when a company is subject to the discipline of the free market, political supervision is no longer necessary or appropriate.

Happily, Colorado has a unique head start on the "I'm-not-a-utility-so-don't regulate- me" approach, giving it a decided advantage over other states in executing its reform. While not widely known, ***the state already allows companies that do not hold themselves out as "public utilities" to offer competitive service.*** In *Public Utilities Commission v. Colorado Interstate Gas Company*, the Colorado Supreme Court determined that Interstate, which sold gas to eleven customers, was not a public utility and could not be required to procure a "certificate of public convenience and necessity." The Court noted that:

There is nothing in the record to indicate that either party [Interstate or its customers] ever gave thought to or mention of the fact that Interstate might be a public utility, subject to control by PUC with reference to rates, facilities and financing. The parties dealt with each other at arm's length and as corporations engaged in private business.

The Court further found:

Interstate has at all times reserved unto itself the right to determine who it will serve and on what basis. Such policy pursued over a period of twenty-six years is contrary to all concepts of a public utility.

Noting Colorado's uniqueness, Trigen Corp. noted in a white paper that "As far as we know, only one state allows anyone but the monopoly utility to install an electric wire on public property, including streets. In all other states, a factory complex with buildings on two sides of a public street can not supply itself with electricity." The remedy, according to the company's white paper, is to "Allow any person or firm to run new wires to supply neighbors with electricity." The firm further observes that Colorado "has a law that allows a person or firm to construct their own pipes or electric wires to others as long as they do not offer their services to the public. This seems so elegantly simple."

It is simple-especially compared to the intricacies, infrastructure and regulatory machinery required to operate a forced open access regime. The law must be further enhanced such that a companies can construct wires or pipes regardless of whether the companies "offer their services to the public."

Another option for reform might be language such as that below, adapted from the Title VI, Sec. 601 of the Federal Aviation Administration Authorization Act of 1994. Those federal provisions preempted state regulation of intrastate trucking carriers. Adapting the language slightly and applying it to electricity would entirely remove the power of regulators to interfere with electricity competition in Colorado:

- (a) FINDINGS - The Colorado legislature finds and declares that-
- (1) the regulation of new entry in the provision of electric service has imposed an unreasonable burden on commerce;
 - (a) impeded the free flow of trade in a needed service;
 - (b) placed an unreasonable cost on Colorado consumers in terms of restricted choice and foregone innovation.
 - (2) certain aspects of the state regulatory process should be abolished or preempted.
- (c) PREEMPTION OF STATE ECONOMIC REGULATION OF ELECTRICITY SERVICE - GENERAL RULE - The Public Utility Commission and political subdivisions within the state may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of any electricity provider.

The idea of the foregoing proposals would be to limit PUC interference in the first place. Existing utilities' control of their assets would be protected, but the utilities would no longer be protected from competition.

Interestingly, in *City of Colorado Springs v. Mountain View Electric Association*, Colorado's Court of Appeals has declared that Colorado home rule cities have, under the Colorado Constitution, the right to be a monopoly supplier of electricity within their boundaries.⁵⁴ Obviously this finding is incompatible with any form of electricity competition and will likely have to be overturned by a constitutional amendment specifying that cities may not operate monopolies or exclude free business competition. Electricity does not necessarily obey home rule city boundaries in its movements between suppliers and buyers across the state. As with any other form of commerce, customers should have the right to select alternate providers, and newcomers should have the right to set up shop and serve them. As the foregoing discussion indicates, all barriers to competition must go for the electricity marketplace to evolve smoothly and to maximize reliability.

X. Conclusion: Current Dilemma Resolved

The choices for traditional utilities today are either change, go away, or enlist the government to delay the inevitable. While only the latter approach harms the public, it is a prominent utility strategy in the United States. Colorado has been different, since its dominant utility (Public Service Company) has been an advocate of restructuring. PSC understands that large companies in a regulated market can-if they pay attention to consumers-make greater profits in a free market. Ironically, Colorado's relatively low current electricity prices have been a major barrier to reform. The other major barrier has been the rural co-ops and the municipal government utilities which want to "protect" their customers from having any choices.

Colorado's Restructuring Committee should recognize that today's industry could be far more vibrant than it is, and prices could be significantly lower within a competitive marketplace. Attempts to forestall reform altogether or partway measures that maintain a half-regulated, half-unregulated "forced open access" vision of the electric industry will leave Colorado utilities ill equipped to face the future, and will saddle Colorado businesses and homes with unnecessarily high costs.

Change in the electric utility industry does appear inevitable because of technological changes and customer demands for access to cheaper power. Colorado *will* do *something*. The challenge is to ensure that the restructuring amounts to a genuine deregulation, not merely a

reshuffling of bureaucracies by mandating forced open access and relying on bureaucratic control of the grid. Some well-meaning reformers have proposed forced open access, but they should reconsider: once the utilities' monopoly stranglehold is eliminated, utilities will offer open access *voluntarily* in order to avoid attracting transmission competitors into their territories. Incumbent utilities will cut prices or grant access to competing utilities, ***thus delivering to consumers the benefits of open access but without the government mandate.*** Public Service's own advocacy of competition under the open access model is evidence that it will allow newcomers in. Free-market reformers can drive prices lower and ensure the emergence of new services *without* new regulatory mandates and without the risk of future regulatory mismanagement of the industry.

The foundation of free-market reform is to eliminate the perverse requirement that one seek permission in order to serve Colorado customers. Where applicants must now demonstrate that the "public convenience and necessity require" new construction, they should need to demonstrate nothing other than willingness to accept the economic consequences of their action. Regulators will no longer guarantee their profits.

Full private ownership and control of the grid outperform monopoly regulation because the grid's ability to evolve technologically and remain competitive will be assured. Upon introducing competition, we can see what private actors will negotiate among themselves; we will not have to suffer the distortions of politically based regulation. No matter how benevolent a regulatory agency may be, the fact remains that regulators cannot substitute their own limited knowledge for the wealth of knowledge that is provided by free market pricing signals; that is why free-market farms produce more than farms run by bureaucrats on five-year plans. Moreover, bureaucrats sometimes impose their own brands of arbitrariness or opportunistic behavior that emerge from political considerations. The free market punishes such selfish decisions (since customers can choose another supplier), but a regulated, government-controlled market protects arbitrary decision-makers from the consequences of their actions. Colorado's current dilemma over restructuring its electricity industry will be resolved when Colorado realizes the answer to reform is not to take away property rights by imposing forced upon access, but to remove the state's own legal prohibitions on voluntary competition .

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Endnotes

- 1 PSCo. merged with Southwestern Public Service Co. of Texas in August 1995 to form New Century Energies (and has since formed a joint venture called Cadence-with Cinergy and Florida Progress Corp.) See Steve Saunders, "Grid Unlocked: More States Are Turning the Key for Electricity Deregulation," *Plants Sites & Parks*, August 1998. (On web at <http://www.bizsites.com/PastPres/AS98/utility.html>.) See also the New Century website at <http://www.psc.com/about/default.htm>.
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- 15 Roger Pillion, "Lawmakers Pull Deregulation Plug," *Denver Post*, March 20, 1998, p. C2
16. "Colo. Solons Opt for More Study," *Electricity Daily*, Vol. 10, No. 83, May 1, 1998, p. 2.
- 17 For a chronology of restructuring events in Colorado (as well as status in the other states) see the U.S. Energy Information Administration web site at http://www.eia.doe.gov/cneaf/electricity/chg_str/tab5rev.html.
- 18 The 105,341,408 residential customers in the U.S. purchased 1,082,491 million kWh of electricity during 1996, or 10,276 kWh each, on average. Dividing the average by 12 months yields 856 kWh per month. 856 kWh per month times the average residential price of 8.36 cents per kWh yields an average monthly bill of \$71.56. Raw data from U.S. Department of Energy, Energy Information Administration, *Electric Sales and Revenue 1996*, Document No. DOE/EIA-0540(96), December 1997. (Current data is now available on the EIA's web site at http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html.)
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- 20 "Administration's Plan Will Bring Competition to Electricity, Savings to Consumers," U.S. Department of Energy, March 25, 1998, p. 1. (Available at <http://198.124.130.244/news/releases98/marpr/pr98035.htm>.)
21. Michael T. Maloney and Robert E. McConnick, *Customer Choice, Consumer Value: An Analysis of Retail Competition in America's Electric Industry*, Citizens for a Sound Economy Foundation, 1996, <http://hubcap.clemson.edu/customerchoice/>
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34 Robert J. Michaels, "Stranded Investments, Stranded Intellectuals," *Regulation*, 1996, Number 1, p. 47.

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